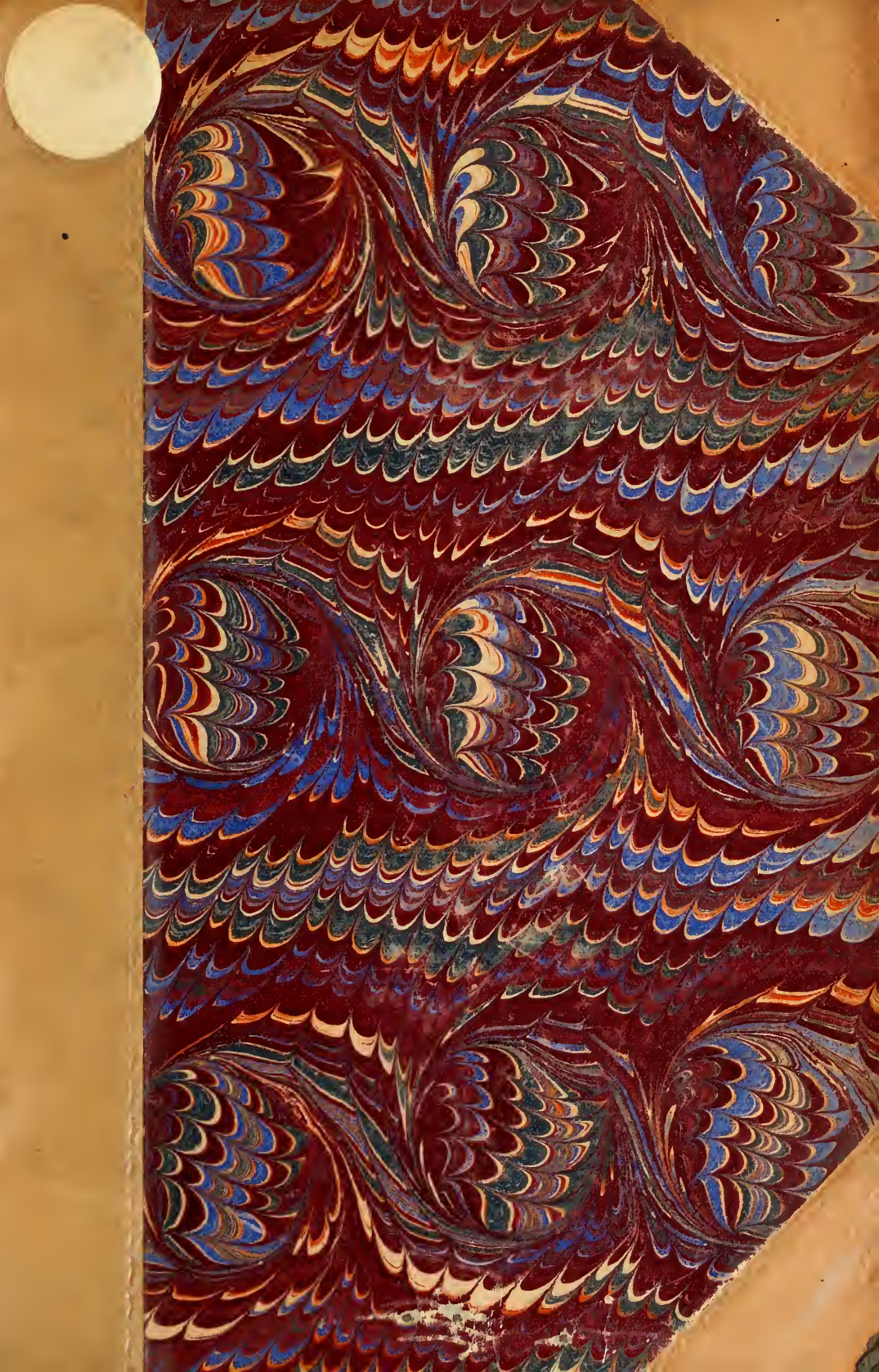

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President of Clark University and Professor of Psychology and Education.

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LATIN IN THE HIGH SCHOOL.

By EDWARD CONRADI, Fellow in Clark University.

The educational value of the different high school studies has received considerable attention in recent years, not only in this country but also, and even more so, in Germany. This question is of special interest when the importance and the pre-eminence of certain school studies is questioned with the idea that they may, in many cases, cost more than they are worth. The storm has been raging especially about the classic languages, which have had a pre-eminent place in secondary curricula ever since the days of Sturm. Until quite recent years no one was considered cultured unless he had studied Latin, and possibly Greek, a certain number of years, and to those two languages was given the first place in the programmes of study. With the advance of modern science and the modern languages, their place gradually has been disputed until now, when they are slowly and reluctantly taking their place among other subjects of study, and, like other studies, the student pursues them when they are necessary, or helpful, or interesting in the line of work he is pursuing. In connection with the discussion of recent years it is interesting to see the results of studies that have been made to ascertain what has been accomplished in the study of the classical languages in the secondary schools.

Prof. Nelson G. McCrea recently tabulated the results of the Latin papers of the College Entrance Examination Board for the first three years. He read 8,896 papers but reports only those that received a rating of from 60-100 per cent. The papers on Cæsar, Cicero, and Vergil ranged from 58-88%, but the average of all the grammar papers was 41%, of all the elementary composition papers about 42%, and of the ad-

vanced composition papers about 31% for the three years. He says, "We can scarcely view these figures with equanimity, much less gain from them hopefulness for the future position in education of a subject whose claims are now so seriously challenged." He thinks this condition of things can be remedied if the Latin teacher focuses on the Latin syntax and vocabulary and not on Roman history, religion, archæology, etc. He says for the successful performance of the work that it ought to do in Latin the college requires that students at entrance should have (1) a working vocabulary of from 2,000-2,500 words which they can use with equal readiness in translating Latin into English and English into Latin, *i. e.*, which they really know; (2) a ready control of all the fundamental principles of syntax. He proposes a plan by means of which the student shall know at the end of the first year at least 300 words, at the end of the second 400 more, at the end of the third 700 more, at the end of the fourth 800 more, making a total of 2,200 words which the student can use freely in translating from one language into the other. These results, he admits, are not obtained at the present time.

Thorndike asked a number of students of Latin the following questions: (1) Was Cicero courageous? (2) In which were the Romans most proficient, making laws, writing books, or building beautiful buildings? (3) Which were the Romans most like, the English or the Americans? Why? (4) Is there any other reason for reading Cæsar besides the wish to learn the Latin language? The answers obtained lead him to the conclusion that it seems fairly sure that the average high school student is more likely to be misinformed than instructed about Roman history by his year's reading of Cicero. He gets only a superficial stratum of fact and may be utterly mistaken in his interpretation of it. The text seems to have failed signally to arouse any useful interest in the man Cicero or the times.

In 1903-04 I made a rough test as to a student's Latin vocabulary as follows: The whole Latin vocabulary at the end of Collar and Daniel's First Latin Book was printed, without the definition, leaving space enough on the galleys for the student to write the definition to the right of the word. Thirty-five students were tested: a class of 24 and a class of 11. The class of 24 had completed second year Latin and therefore was also given a list of words from the Gate to Cæsar, their second year text, including only those words not found in Collar and Daniel. The class of 11 was a first year Latin class in the 9th grade, who had studied Latin a little over a year—about 1½ years. The list from Gate to Cæsar was given the class complete; it contained about 450 words. The list from Collar and

Daniel was not given complete, the second year class accidentally lost a few of their Latin hours at the end of the year, and the 9th grade class could not give the required time to the work. In the latter case a test-list was made by having an expert strike out the most common and the rarest words in the book, one of one kind for one of the other, until the whole list was reduced from 1,168 to 685 words. For the second year high school class the new words in the fables in Collar and Daniel had to be struck out since the class had omitted that part of the book.

In each test the words given were so mixed that the pupil could not readily remember what part of the vocabulary he had gone over. Furthermore, in the second year class these tests were thrown in incidentally during a few weeks so that the student was not aware that they were coming and so probably did not make special preparation. In the 9th grade class the tests, by mistake, were given one after another in regular succession. It should also be mentioned that in this last case the teacher knew about six months in advance that these tests were coming, introducing a possible unconscious psychological factor which might influence the results.

The following instructions were given to each pupil: (1) Write the name, date, and age at the top of each paper. (2) Write the definition of the word to the right. (3) Do not stop at words you do not readily recall, but go on writing those definitions you do recall. If you get through the list before the time is up, go through the list again, filling in if you can, those words you skipped the first time. Try to get over the whole list at least once. This last precaution was given for fear that the student might stop to think at the first word he did not know, and thus confuse himself and lose valuable time which he should use to define the words he did know. The high school class was given about 230 words to go over in a session of 45 minutes and the 9th grade about 137 in a session of 25-30 minutes. Care was taken to note during the first tests whether the lists were too long, but it was found that the pupils had time enough to write the definitions of the words they did know. The high school class went over about 910 words out of a total of about 1,618, and the 9th grade class over 685 out of a total of 1,168. Thus in both cases more than 50% of the total number of words the pupils had met in their work were comprised in the lists.

In the schools where these data were gathered it was a standing request of the principal that the Latin teachers give special attention towards the pupils' acquiring a good Latin vocabulary. It should also be stated that the 9th grade class was reported by the teacher as an exceptionally bright

class, not only in Latin but in their studies in general, and that the high school class was unusually poor in Latin. This latter was a college preparatory class and many of the students took Latin only because their fathers insisted on their doing so because it was demanded for entrance to college. The study of Latin seemed to be a perfect bore to many of them and they wasted the teacher's nerves without gaining any appreciable results, as the returns show and as the teacher herself admitted. All these facts were unknown to the writer before hand, but were gathered while the tests were in progress and were given with frankness and sincerity.

Any one will readily see that the looking over and correcting such a list of words is quite a difficult matter. To credit the pupil with such words only which he defined absolutely correctly according to the book definition was doing him a possible injustice, since in free translation a word may be used in a way different from the orthodox vocabulary use and therefore the definition given by the pupil might vary from the strict use somewhat widely and yet the sentence might be so constructed in English that the definition would be correct. It was therefore deemed better to credit the pupil with every definition that could be construed in his favor and mark wrong only those which were absolutely missed. This method is, indeed, not free from error but the writer felt that he would rather err in the direction of leniency.

The classification of the words into parts of speech was considered of no great value since it is difficult to tell which words occur the oftenest in the text. Nouns undoubtedly occur oftener than verbs and so we find that they are better remembered. In the list given the pupils the number of nouns exceeded the number of verbs by 1½%, but 56% of the nouns were defined correctly and only 42% of the verbs. It was also hard to determine whether the parts of speech were properly recognized, especially so where the definition consists of but one word.

In the following tables are given the percentages and the number of words that were marked correct. In table I, giving the result of the high school class, the percentage in Collar and Daniel is based on 460 words, in Gate to Cæsar on 450, unless otherwise indicated. In table II, 9th grade class, the percentage is based on 685 words. The mark * means absent at one test.

TABLE I. BOYS.

	Coll. and Dan.	Gate to Cæsar.	Average %	No. of Words.
1.	49%	18%*	33.5	542
2.	40 "	21 "	30.5	494

	Coll. and Dan.	Gate to Cæsar.	Average %.	No. of Words.
3.	42%	17%	29.5	477
4.	41 "	16 "	28.5	461
5.	30 "	14 "	22.	356
6.	29 "	15 "	22.	356
7.	13 " *	10 "	11.5	186
8.	19 "	00.3%*	9.5	154
9.	18 " *	00.2%*	9.	146
Average	31%	12.4%	22%	352

TABLE I, Continued, GIRLS.

	Coll. and Dan.	Gate to Cæsar.	Average %	No. of Words
1.	75%	54%	64.5	1,044
2.	72 "	47 "	59.5	961
3.	67 " *	34 "	50.5	817
4.	63 "	36 "	49.5	800
5.	64 "	35 "	49.5	800
6.	60 "	37 "	48.5	784
7.	61 "	31 "	46	744
8.	55 "	27 " *	41	663
9.	56 "	25 "	40.5	655
10.	48 "	27 " *	37.5	606
11.	45 "	24 " *	34.5	558
12.	38 "	21 "	29.5	348
13.	29 "	14 "	21.5	324
14.	30 " *	10 "	20.	315
15.	24 "	00.5%	12.	194
Average	52.5%	28%	40.3%	641

TABLE II.

Girls.			*Boys.*		
	Per cent.	No. of Words.		Per cent.	No. of Words.
1.	76	887	1.	63	736
2.	75	876	2.	58	677
3.	72	841	3.	46	537
4.	72	841			
5.	62	724	Average	55.6%	650
6.	55	642			
7.	55	642			
8.	53	619			
Average	65%	759			

It may be interesting to compare these high school pupils' Latin vocabularies with the vocabularies of children about two years of age. As we see from the above tables, the highest of

the boys had about 550 words, and all the rest were below 500; more than half of them were below 400 and the three lowest were below 200. Of the new words they met in the second year Latin, two of the boys had one word each and one girl had 2. The girls have a higher percentage. Seven are above 700 and all but four have a higher percentage than the highest of the boys; only one is below 200. Taking the class as a whole, more than two-thirds of the class had their vocabulary below 700 and just ½ had theirs below 500 words. The vocabularies of little children 24-30 months old, as given by Tracy, are as follows: 24 mo., 285, 263, 250, 139; 26 mos., 171; 27 mos., 677, 451; 30 mos., 327. Mrs. K. C. Moore's child had 475 words at 24 months, and Harlow Gale's three children had 783, 741, and 729 respectively; the two girls of Professor West, as reported by M. C. and H. Gale, had 614 and 578 respectively, and the boy 115 at the age of two years. The vocabulary of Humphrey's child was 1,121, of Deville's 739, and that of Marion Martindell 783 at the age of two.

Many of the mistakes where words were defined wrong were due to various causes. Sometimes words of similar sounds and looks were confused in the student's mind, as for instance when he confused *poena* and *Poenus*, *puto* and *pono*, *cupio* and *capio*. It also sometimes happened that the pupil gave the opposite meaning as when he said *lugeo* means "rejoice." Many mistakes were due to wrong guesses or to wrong associations, or to both working together; good examples are *fatum* = "plump," *mos* = "mouse," *dens* = "thick," etc. Errors on guesses were rather more frequent with the bright pupil than with the dull one. In some cases the dull pupil seemingly did not have orientation enough to see even the plainest analogies. Again, the number of errors in the beginning class is somewhat higher than those in the high school class in Collar and Daniel, but the errors of the latter class in the list from Gate to Cæsar are by far the most numerous, more than twice as many errors being made than in the list from Collar and Daniel. The percentage of errors for the 9th grade was 7%, for the high school class it was 6% for the list from Collar and Daniel and 15% for the list from Gate to Cæsar. This may indicate that with time the line of demarcation between known and unknown words becomes more distinct, or this difference may be due to the fact that a certain number of words from Collar and Daniel were repeated in Gate to Cæsar and so became fixed, whereas all the hazy words of the year before were forgotten. However, it is also in some measure due to wrongly defining the Latin word by its English analogue. "Errors" in this paragraph does not include words left blank.

A comparison of these children's vocabularies with the ideal one suggested by McCrea can hardly be made since these children were not taught by the method suggested by him, and, moreover, their vocabularies are of words they recognize at sight and not such as they can use in translating from English into Latin as well as from Latin into English. It is evident that their vocabulary which they can use in translating both ways is much more limited than that which the table would indicate, yet, applying the percentages to the complete vocabularies of the texts, many of the second year pupils have, according to the table, a much smaller vocabulary than 700 words. None of the boys had even 600 and eight of the girls were below 700.

We see that the 9th grade has a much higer percentage of correct results than the other class. There are several explanations which suggest themselves. In the first place, the class as a whole is a brighter class, and secondly, the whole vocabulary was still fresher in their mind, they having begun Latin a little over a year previous. Furthermore, being younger than the other class, they were yet closer to the so-called period of verbal interest and verbal memory. The difference in the average ages of the two classes is about 1½ years. And I should again refer to the factors mentioned before, especially to the fact that the tests were given on successive days which may have led the pupils to make special preparation. The results did show that some special preparation may have been made in some cases. All showed improvement in the second test and some showed decided improvement, but only two had the last four tests higher than the first, and six made the last three tests on about the same level of correct results as the first, whereas three showed a falling off. Moreover, this class held more closely to the text-book definition than the other, probably partly because they had a better verbal memory, partly because they had closer vocabulary drill, and partly because they may have made special efforts to review the text-book vocabulary from day to day while the tests were in progress. It is true, most of these children defined more than enough words to meet Professor McCrea's standard, but, whether they satisfy that standard cannot be determined since from the tests one cannot tell how many words they were able to use freely in translating Latin into English as well as English into Latin.

It was interesting to note that many words, especially in the list from Gate to Cæsar, were defined rather in their English than in their truly Latin use, *i. e.*, the pupils gave the definition of the English derivative instead of that of the Latin word. Many of these words, it is true, might have a meaning, often figuratively, similar to that of the English derivative, but the

student had probably never met them in any other but their truly Latin sense, since the text vocabulary gave only the strictly Latin use. For example, *arbitror*=arbitrate, *eruptio*= eruption, illustrates what I mean. Here we have Latin interpreted in the light of the English and not English by means of Latin. It is, therefore, doubtful whether these students really strengthened their English vocabulary by means of the Latin; they rather seemed to use their English words to get an acquaintance with Latin, thus reversing the process which is supposed to take place.

All the boys in the high school class belong to those who did the poorest. There were nine boys in the class, six of whom were below 30% and 33.5% was the highest average made by any boy. Whereas of the 15 girls three were above 50%, six others, or 9 in all were above 40% and only 4 were below 30%. The highest average per cent. made by any girl in this class was 64.5. The average of correct results by all girls is 40.3%, of the boys only 21.7%. That is, the standing of the girls is almost twice as good as that of the boys. In the 9th grade class there were only three boys, one stood fifth, one seventh, and one lowest.

What is the cause of this difference between the sexes? Numerous explanations might be offered. It should be added here that the number of students involved in this study is too small to permit of definite and authoritative generalizations and that the number would have been increased were it not that such an investigation takes so much of the pupil's time. However, some suggestions and possible explanations may be in place. It is well known that studies that have commercial, industrial, political and other practical bearings are more interesting to boys, but that has more specially a tendency to reduce the number of boys taking Latin or Greek, if they have any say so in the matter. In this case a number, if not all, of the boys took Latin not because they liked it or felt the need of it, but simply because their fathers insisted that they take it because it was required for admission to college. They were not dull boys as the Latin teacher very well knew and as the high school record shows. They had good records in other studies even in French and German, but the Latin did not appeal to them and so under compulsion did they remain in the class as an almost absolute dead-weight. That some of these boys did absolutely nothing in the second year Latin class is quite evident, not only from the returns but from other testimony. They did even worse than nothing; they were cultivating habits of carelessness and idleness which stifle all impulses to that healthful activity without which not only school work, but life itself is a burden and a failure. These

boys were buying their Latin at a fearful cost—were they not paying too much for their whistle?

Another part explanation may be found in the fact that at this age boys would do better under the more sturdy influence of a male teacher. These boys had not only all their Latin training but almost, if not quite, all their other training under female teachers, and it is possible that with them that natural and healthy reaction against too much woman's influence, however good and refining it may be in its way, had come—a reaction which is apt to come in every true and vigorous boy, and which should be respected in the organization of our schools. With proper attention given to the nature of boyhood even this to them uninteresting study might have yielded better results. Professor Armstrong, of the Mosley Commission, says that the distinctly low average of attainment in our high schools is in large part due to the preponderance of women teachers. It seems to the writer a sign in the right direction that the percentage of female teachers in our secondary schools has slightly decreased in the last few years.

In the Report of the Committee of Twelve of the American Philological Association the fact is emphasized that the increase in the number of Latin students in secondary schools from 1889–90 to 1897–98 had been 174%, more than twice the increase in the number of secondary students, and this increase was ascribed to an increase in the interest in Latin studies and it was suggested that this would mean an increased interest in Greek. It may well be asked how much of this increase is due to interest and how much to a onesided and abnormal conception of the parent or the school who forces this Latin upon the student much as the biscuit was forced upon Gulliver, simply because tradition, supported yet by most colleges, says Latin is basal in all education above the common school. How much is this increase due to the interest of the student and how much to the pedagogical conditions which furnish us teachers who can teach Latin as dead languages are taught, but not teachers who can teach a living language in a living way. It is quite certain that a number of the members of this Latin class are innocent of wilfully increasing the total number of Latin students in this country, and how many more such students there are further investigation only can reveal. And how many there are who make a creditable record only by struggling against the stream with all their might, who, under the halo of reverence that clings to classical learning, believe that by a few years of Latin study they become wise and cultivated men and women, though they drop the study the minute the high school course is ended, we may never know. Whereas, if the same time and energy (and the amount of available

energy increases if the friction decreases) were given to some study of more live interest it would lead the pupil into lines of reading and study which would be to him not only a source of information and culture, but of interest and pleasure as well in after life. Those who believe that to pursue difficult uninteresting studies is a good preparation for the difficult battles of life, forget that probably all true successes in life are made by men who are interested in what they do. Interest does not mean easiness; the most difficult problems are solved by men who are interested in their task. If dead languages are not interesting—and they often are not—take living ones so that the exuberant life of youth be not stunted even before its bloom. President Hall advises his students to be sure to take a problem that is interesting to them because it means that one-half of the difficulties are already solved. No better advice can be given, and in its essentials it applies to high schools as well as to universities. This is not soft pedagogy but sound common sense.

President Hall thinks the cause of this increase in the number of Latin students in our high schools is external; that Latin is one of the cheap subjects to teach and that the teaching of it is more open to women than science, but holds that the chief cause is its prestige and tradition. As to Latin in the high school he says that for the American boy and girl, high school too often means Latin. That this gives at first a pleasing sense of exaltation to a higher stage of life, but after from one to three years the great majority who enter the high school drop out limp and discouraged for many reasons, largely, however, because they are not fed. He says the nature and needs of the adolescent mind demand bread and meat, while *Latin rudiments* are husks.

It is possible that we have passed the climax of this Latin craze. Since 1898 there has been a slight decrease in the percentage of students taking Latin. In 1898 it was 50.29%, in 1901–02 it was 49.52%, there being a slight decrease each year. The number that study Greek has also decreased; in 1901–02 the total number of students taking Greek was 241 less than in 1897–98, being a decided loss and not a gain as was anticipated, suggesting that the increase in the number of Latin students is probably due to other causes than a natural interest in the classics.

In Ontario, Canada, from 1895–1900 the number of high school students that studied Greek was uniformly 6%; during this time Greek was optional as to university entrance but was held equal to two modern studies. In 1900 it was made optional with German, French or science and the percentage immediately dropped to 3½. The natural interest in Latin would probably behave similarly under like conditions.

The supposition that the increase in the number that study Latin is due to a natural interest and the facts as they are found that so many students attain such poor results do not harmonize. It is true, bad results may be due to many causes, one of the most important being bad teaching, but how much may they not be due to a lack of native interest which cannot be aroused even by good teaching? It is also true that poor results and bad methods are found in other studies than the classical languages, but this is largely due to the formalistic cut-and-dried dead-language methods that have thoroughly laid hold of many of the modern subjects.

In Germany modern studies have made great progress within recent years. The *Gymnasium* will, undoubtedly, for some time to come have its usual quota of students, at least as long as the social feeling is what it is now. Though the emperor has placed the three higher schools, *Gymnasium*, *Real-gymnasium*, and *Ober-Realschule* on the same footing as far as culture value goes, it is too well known that a stroke of the pen cannot obliterate the imprint of centuries of tradition. Moreover, whereas the graduate of a *Gymnasium* is admitted to all the privileges of the university, technical as well as others, and the graduate of the *Real-gymnasium* is only excluded from the study of theology and a few minor privileges, the graduate of the *Oberrealschule* is in addition excluded from the study of medicine. Why a graduate of a *Gymnasium* should be permitted to take technical courses and a graduate from an *Ober-Realschule* should be excluded from the medical courses is difficult for the democratic American mind to understand.

The following are some comparative figures as to the attendance at the higher schools of Prussia. They are divided into two groups; those in the first group have Latin (some of them, of course, also Greek), and those in the second group have neither Latin nor Greek.

	1880	1890	1900	1902
Gymnasium	74,556	76,705	88,366	93,655
Realgymnasium	26,684	25,769	21,256	24,197
Pro-Gymnasium	3,995	5,184	6,972	5,210
Real Pro-Gymnasium	13,204	8,739	1,850	1,595
Total	118,439	116,397	118,444	124,657
Ober-Realschule	1,663	4,129	14,967	17,426
Realschule	5,093	17,360	30,062	34,206
Total	6,756	21,489	45,028	51,632

We see that in 1880 the ratio of non-classical to classical students was 1:19.4, and in 1902 it was 1:2.4. From these fig-

ures it is evident that the *Realschulen* meet a real need, and, if Lehmann is correct, many more students would attend them were it not that students from *Realschulen* cannot pass over to the *Gymnasium* without great inconvenience, and well situated parents still refuse to cut their boys off from the *Gymnasium* at so early an age (9 to 10), since the latter school is still the school for the aristocrats. Furthermore, the great increase in the number of Latin students in the *Gymnasium* and the *Realgymnasium* from 1900 to 1902 can be partly explained by the fact that in 1900, the *Gymnasium* course has been liberalized by making Greek optional below "Obersekunda," and that the *Realgymnasium* since 1901 prepares for the medical courses and since 1902 for the law courses in the university. Moreover, there is a constant change taking place, the six class schools being abandoned or made into nine class schools; this is especially true of the last two in the first group.

The predominance of the classical languages in German secondary education is largely due to class distinctions. Only the classically trained men belong to the "höheren Fakultäten" and can move in "higher" society. Paulsen says: "When a few years ago the question was current as to whether the 'Gymnasialzwang' should be repealed for medical students and the medical profession, the medical associations were asked for an expression of their opinion; they all were against admitting the graduates from the *Realschulen* to the medical course. One would be deceived, however, if one would see in this a proof that the instruction in a *Gymnasium* was considered better or more suitable; their refusal showed merely, as one could read in their verdict, directly as well as between the lines, that the *Gymnasium* was considered more aristocratic; they feared a lowering of the social rank; if the jurist would also go over to the *Realschule*, one could hear, the physicians would not have had any objections." More recently Lehmann expresses the same views. (On this point see also Schmeding, Die Klassische Bildung der Gegenwart, pp. 90 ff.)

The results obtained in Germany are not very flattering as the classicists themselves admit. Numerous voices are heard on the subject. Lehmann summarizes the situation well in these words: We fully recognize the value which humanistic culture has had for a long time for German education; yet, on the other hand, we must not deceive ourselves, for the effect it formerly had it no longer exerts That our *Gmynasium* students no longer respond in the smallest degree to the demands which the humanistic culture ideals make of them, that our students, our young officials and scholars generally show no trace of interest in, nor attachment to, the studies which they pursued during their school course, are facts which the friends

as well as the enemies of humanistic culture admit. The well-known judge, the oft quoted physician, who after his day's work picks up his Horace or his Homer, belongs to the generation before 1870; he who left the schools since that time, unless he be a philologist, usually sells his classic authors or places them in "die Rumpelkammer." And, what is still worse, they produce no lasting inward effects, they cannot because they never had a live influence. To what extent antiquity as a whole and its noblest phenomena, to what degree Horace and Homer are inwardly unknown to our present day graduates of our *Gymnasien*, is known only to him who has had opportunities for observation. Not only do they fail to get a knowledge of language form, but the content and value of humanistic culture, namely, an understanding of the very essence of antiquity, of its works of art and its great men, has fallen by the wayside.

This statement of Lehmann is a very severe indictment. It would indeed be almost calamitous if a knowledge of the Greek and Latin languages were essential toward an understanding of modern thought and modern society. Such, however, is not the case as the classicists themselves begin to admit. Dr. McCrea, for instance, goes farther than that and says that the proposition that a knowledge of the Græco-Roman civilization is educationally necessary, because without it one cannot understand the constitution of modern society, is no longer defensible. He also says that few, if any, students when entering college can give upon the basis of their study of Latin and Greek alone a fairly comprehensive, coherent, and rational account of the salient features of the ancient social organism, nor can define in an intelligent way the nature, extent, and value of the influence which Greece and Rome have respectively exerted in the advancement of civilization. This is undoubtedly true. He focuses on one argument for Latin and one only, viz., the value of Latin as a linguistic discipline. That Latin is a linguistic discipline is true also, any language is; but whether it is the best, the most fruitful linguistic discipline for a high school student who knows only his mother tongue and who will drop Latin as soon as, or before, his high school course is ended, or who does not study philology or allied subjects in his college course, is not so self-evident. Latin is a language so different from ours that it presents baffling difficulties to the young beginner. Paulsen says this difference is an obstacle which can be overcome only by an exclusive sojourn for many years in the world of antiquity. With all its borrowings English has remained true to itself and no amount of study of Latin grammar can give us the force of the living English idiom. The structure of English is English.

"The Latin may contribute its tale of bricks, yea, of goodly and polished hewn stones, to the spiritual building, but the mortar, with all that holds and binds the different parts of it together, and constitutes them into a house, is Saxon throughout" [Trench]. Moreover, our "Sprachgefühl" has developed on its own soil and refuses to accept anything that does violence to our idiom.

Some classicists hold that Latin is fundamental to a study of the science of language. But here comes the evolutionist who is not only acquainted with dead languages but also lays under contribution the living languages of mankind—of the Russian and the Chinaman, of the Hottentot and the Indian—and says, without the knowledge of these we are wofully ignorant of linguistic evolution and that the Greek, Latin, and Sanskrit aspects of English have been fearfully overdone; that Latin and Greek are incidents or accidents, not necessities of our mother-tongue. Dr. Chamberlain, furthermore, says that no language is a model for another; that "for the ordinary boy and girl the inflections and conjugations of the classical languages are simply a millstone around the neck." This is undoubtedly true of the great majority of youths to whom not "fossil grammar" but living speech is matter for education. He says further: "Latin has no more shaped the English tongue than Rome has built the Saxon heart or made the Saxon arm. English grammar is soundly Anglo-Saxon run through the sieve of a mind that never had a Latin bent."

One of the chief reasons that are advanced for giving Latin such a prominent place in the high school is that the English vocabulary is so largely derived from Latin. We have, it is true, many words from the Latin either directly or through the French. An exact estimate of the foreign element in our language is impossible. The English vocabulary is an absolutely indefinite quantity since we are coining and borrowing words every day. Not only that; it is also difficult to determine what words should be excluded from the calculation, or, in other words, what constitutes a word, as C. P. G. Scott says. To what extent should scientific and medical terms, nouns in "ness," adverbs in "ly," etc.; to what extent should non-naturalized foreign words and provincialisms be included, are questions the answer to which would vary with the individual investigator. Yet, notwithstanding these variable factors and sources of error, it may be interesting and helpful toward a general orientation to see the results that different investigators in this field have obtained.

Trench, in 1858, estimated the English vocabulary at rest as follows: Saxon origin 60%, Latin 30%, Greek 5%, all other sources 5%; with language in motion, that is, taking all the

words used by authors as they come, he thinks that 70:10 or 80:10 would fall short of expressing the ratio of Saxon to Latin words. O. F. Emerson says that according to dictionary count 25% of our language is of native origin and 75% foreign, but counting all native compounds the ratio would probably be 33⅓%, and 66⅔% respectively. The 66⅔% would include *all* foreign sources. He thinks in actual use we have less than 30% foreign words. He gives the following table of percentage of native and foreign words as used by different writers on the running page: Spenser n. 86, f. 14; Shakespeare n. 90, f. 10; Bible, three Gospels, n. 94, f. 6; Milton n. 81, f. 19; Addison n. 82, f. 18; Swift n. 75, f. 25; Pope n. 80, f. 20; Johnson n. 72, f. 28; Hume n. 73, f. 27; Gibbon n. 70, f. 30; Macaulay, Essay on Bacon, n. 75, f. 25; Tennyson n. 88, f. 12.

Anderson says that by a dictionary count we find about $\frac{5}{7}$ of our words of classical and $\frac{2}{7}$ of Germanic origin with about 2,000-3,000 words from other sources. Meikeljohn makes the ratio of Anglo-Saxon to Latin words a little less than 1:2. Hemme says that two-thirds of the English vocabulary can be traced to Latin sources, but admits that in ordinary conversation, and even in literary productions, words of Germanic origin are chiefly used.

Skeat, in his Etymological Dictionary, makes an elaborate attempt to classify the words in the English language as to the sources to which they originally belonged. It is the most exhaustive piece of work of its kind of which the writer knows. The words selected for the purpose are chiefly those given in large type in the dictionary, to the exclusion of mere derivatives of secondary importance. The English list, he says, appears short in proportion chiefly because it contains a large number of these secondary words, such as *helpful*, *happiness*, *hearty*, and the like. Of the foreign element it is the Latin only that concerns us here. The ratio of Anglo-Saxon to Latin is almost exactly 1:2, but if we add to the Anglo-Saxon the words derived from the Scandinavian, the German and the Dutch the ratio is somewhat less than 2:3. He also gives a list containing the principal Latin words productive of rather numerous derivatives and which readily admit of prefixes. Words that produce but few derivatives or that are of no special interest are excluded. There are 448 words in this list giving rise to approximately 3,000 English words. Among these 448 there are 107 that can be traced back to Indo-Germanic roots. If it is necessary to know the origin of a word in order to understand it, we must, with these 107 words, go beyond the Latin.

Greenough and Kittredge consider it of little value to count,

as to origin, the words in a dictionary or of an author. They counted the words in A in Harper's Latin Dictionary, excluding proper names, doublets, parts of verbs, and adverbs in *e* and *ter*, to see how many had been appropriated by the English language, and found that fully one-quarter had come over. They think that, roughly speaking, that percentage will hold for the entire Latin vocabulary.

Marsh says he made no attempt to determine the etymological proportion of our entire verbal stock because no dictionary contains more than two-thirds, or at most three-fourths, of the words which make up the English language. He says dictionaries are made from books and for readers of books and that they all omit a vast array of words, chiefly Saxon, which belong to the arts and to the humbler fields of life, and which have not yet found their way into literary circles. Upon examination he finds that in the total vocabulary of the Ormulum (which, in opposition to most philologists, he considers English rather than semi-Saxon) nearly 97% of the words are Anglo-Saxon; that in the vocabulary of the English Bible 60% are native; that in Shakespeare the proportion is nearly the same, while the stock of words employed in the poetical works of Milton less than 33% are Anglo-Saxon. He adds, however, that the relation between Milton's entire verbal resources and his habitual economy in the use of them is most remarkable. He says that it is true that some words of Greek and Latin origin, such as *air*, *angel*, *force*, *glory*, *grace*, *just*, *mortal*, *move*, *nature*, *part*, *peace*, etc., occur very often, but that many of the foreign words employed by him are found in but a single passage, whereas the Saxon words are many times repeated. And this, he says, is not due to particles and other small words, since Milton as well as Shakespeare, is very sparing of them.

For the purpose of determining more satisfactorily the true character of the diction of Langland and of Chaucer, Marsh counted both the different words of foreign derivation and the repetitions of them in the Passus Decimus-Quartus of Piers Ploughman and in an equal amount of the Prologue to the Canterbury Tales. This is what he found: Exclusive of quotations and of proper names the Passus Decimus-Quartus contains somewhat less than 3,200 words, 500 of which, or 16%, are of Latin or French origin, and as there are about 180 repetitions, the number of *different* foreign words is about 320, or 10%. In the first 420 verses of the Prologue to the Canterbury Tales, containing also about 3,200 words, 370 or rather less than 12% are Romance; the number of repetitions are 70, leaving 300, or rather more than 9% of *different* foreign words.

He also made an attempt to determine the proportion in which

authors employ the words at their command. The following table gives the percentages of Anglo-Saxon words as found on the running page of the different authors. The authors are arranged chronologically.

	Anglo-Sax.
Robert of Gloster, Narrative of Conquest, pp. 354 and 364,	96 per ct.
Piers Ploughman, Introduction (entire),	88 "
" Passus Decimus-Quartus (entire),	84 "
" Passus Decimus-nonus (entire),	89 "
" Creed (entire),	94 "
Chaucer, Prologue to the Canterbury Tales, first 420 verses,	88 "
" Nonnes Preestes Tale (entire),	93 "
" Squiers Tale (entire),	91 "
" Prose Tale of Meliboeus (about 3,000 words),	89 "
Sir Thomas Moore, Coronation of Richard III (7 folio pages),	84 "
Spenser's Faerie Queene, Book II, Canto 7,	86 "
John's Gospel, chap. I, IV, XVII,	96 "
Matthew's Gospel, chap. VII, XVII, XVIII,	93 "
Luke's Gospel, chap. V, XII, XXII,	92 "
Romans, chap. II, VII, XI, XV,	90 "
Shakespeare, Henry IV, pt. I, act 2,	91 "
" Othello, act V,	89 "
" Tempest, act I,	88 "
Milton, L'Allegro,	90 "
" Il Penseroso,	83 "
" Paradise Lost, Book VI,	80 "
Addison, Several numbers of The Spectator,	82 "
Pope, First Epistle and Essay on man,	80 "
Swift, Political Lying,	68 "
" John Bull, several chapters,	85 "
" Four last chapters of Queen Anne, to end of sketch of Lord Byron,	72 "
Johnson, Preface to Dictionary (entire),	72 "
Junius, Letters 12 and 23,	76 "
Hume, Hist. of England, gen. sketch of Commonweath in chap. LX,	73 "
Gibbon, Decline and Fall, vol. I, chap. VII,	70 "
Webster, Second Speech on Foote's Resolution (entire),	75 "
Irving, Stout Gentleman,	85 "
" Westminster Abbey,	77 "
Macaulay, Essay on Lord Bacon,	75 "
Channing, Essay on Milton,	75 "
Cobbett, On Indian Corn, chap. XI,	80 "

	Anglo-Sax.
Prescott, Philip the Second, B. I., c. IX,	77 per ct.
Bancroft, History, vol. VII, Battle of Bunker Hill,	78 "
Bryant, Death of the Flower,	92 "
" Thanatopsis,	84 "
Mrs. Browning, Cry of the Children,	92 "
" " Crowned and Buried,	83 "
" " Lost Bower,	77 "
Robert Browning, Blougrams Apology,	84 "
Everett, Eulogy on John Quincy Adams, last 20 pages,	76 "
Ticknor, Hist. of Spanish Literature, Period II, chap. 1,	73 "
Tennyson, The Lotus Eaters,	87 "
" In Memoriam, first 20 poems,	89 "
Ruskin, Modern Painters, II, Part 3, section 2, chap. 5,	73 "
" Elements of Drawing, first six exercises,	84 "
Longfellow, Miles Standish (entire),	87 "
Martineau, Endeavors after the Christian Life, III. Discourse,	74 "

We see from this table that since the time of Johnson and Macaulay the Anglo-Saxon element has become distinctly more prominent again, some of the modern writers having as high a percentage of native words as Langland and Chaucer. The large percentage of Latin words in Webster's speech, as Marsh says, is due to the frequent recurrence of "congress," "constitution," and other technical legal terms. In the Eulogy of Massachusetts, containing more than 200 words, 84%, and in the peroration beginning with "God grant," etc., 80% are native. These modern writers, though they know more foreign words than the writers of the preceding century, actually use fewer, proportionally, in their literary productions. Marsh thinks that this recognition of the superior force and fitness of a Saxon phraseology, for all purposes where it can be employed at all, is the most encouraging of all existing indications with respect to the tendencies of our mother-tongue, as a medium of literary effort.

Furthermore, the native English is above all the language of the home as is shown by the stock of words used by little children. I studied the vocabularies of six little children in two groups of three each. In the first three there were 1,327 different words, exclusive of inflections and proper names, of which about 14% were of Latin and a few of Greek origin. The vocabularies of the three other children containing together about 1,900 words, exclusive of proper names but not of

inflections, had about 10% Latin. This percentage is increased to about the same as with the first three by excluding all inflections. The percentage as a whole is undoubtedly above the average since all six were children of college professors. These children represent only two families, but as far as the evidence of their vocabularies goes it proves that home-born English is the language of the home; that the deep and tender emotions and feelings and relations of the family and home life can be expressed only in words that have grown up in the holiness of the hearth. Moreover, a great many, if not most, of the words of foreign origin had come in very early, some of them as early as Anglo-Saxon times, not by a pedantic literary method, but by a close living together of races, and so had become thoroughly naturalized.

That the English language has been enriched by the Latin influx is true, but it has been impoverished by it as well. Due to a Latin bias some English writers borrowed foreign words where home-born English would have done as well, and even better. Moreover, by this borrowing process English has lost the power of making compounds, a power still retained by the Germans in a high degree and which is not only useful but also expressive. Old English formed compounds from independent words quite freely. O. F. Emerson says "the word *land* was part of at least sixty-three compounds in Old English, while the word *even* 'evening' was used in twenty-six, and *life* in twenty-seven compounds, and illustrates the expressiveness of some by such words as *life-busy*, *life-care*, *life-day*, *life-fast* 'having life,' *life-ward* 'guardian of life,' *life-way*, *life-well* 'living spring,' *life-win* 'joy of life,' all of which have not come down to modern times. Besides, he says, there must have been many compounds once used, but not now known, because not found in any relic of the older literature.

Many excellent words of Anglo-Saxon stock have been crowded out by Latin words. Trench gives the following: *sooth-saw* was pushed out by "*proverb*," *sour-dough* by "leaven," *to after-think* by "repent," *medeful* by "meritorious," *fore-word* by "promise," *freshman* by "proselyte," *mooned* by "lunatic," *foretalk* by "preface," *sunstead* by "solstice," *leech-craft* by "medicine," *starconner* by "astrologer," *to eyebite* by "fascinate," *waterfright* by "hydrophobia," *wanhope* by "despair," *middler* by "mediator," and adds that on account of their simplicity and force it is to be regretted that some of these words have dropped out. It is certainly no gain to have "prudence" crowd out *forewit*, and "conscience" *inwit*.

President Hall has a list of several hundred "Lost Beauties of the English Language," from which I quote some of those that have been replaced by Latin derivatives. It is to

be regretted, also, that some of these have dropped out. Some, it is true, are still used, but their use is either very restricted or provincial. The first word is always replaced by the second : afterword=postscript; back-word=contradiction; back-stand=resistance; benothinged=annihilated, bilk=defraud; bleary=confused; bode=message; bonny=beautiful; brant=precipitate; brightsome=luminous; couth=graceful; dearworth=precious; deft=dexterous; dingthrift=prodigal; douter=extinguisher; downcome=adversity; eldfather=grandfather; eldritch=haunted; farthel=quarter; fittle=arrange; flinder=fragment; forwent=renounced; forgather=convene; glumps=sullenness; grieve=magistrate; hap=fortune; hent=apprehend; hithercome=arrival; kirtle=petticoat; louton=courtesy; longsyne=antiquity; longsome=tedious ; loveworth y=amiable; lowliness=humility; manful=virtuous; mauner=hesitate; maups=simpleton; meth=courteous; miff=temper; misdo=to err; mithe=conceal; moider=confuse; moltwater=perspiration; nantle=caress; nesh=delicate; niffer=exchange; pithful=vigorous; reuth=compassion; rapen=prepare; ream=effervescence; rogue-house=penitentiary; rowth=abundance; ruff=triumph; ruly=obedient; samely=monotonous; scale=disperse; scorse=exchange; shacker=vagabond; smerly=demure; smire=mischief; smither=fragment; snurle=influenza; sonce=prosperity; soncy=fortunate; speedful=prosperous; speer=injure; springalla=dolescent; stickle=arbitrate; stightle=confirm; stuckets=confectionery; swike=deceive; tenty=careful; tholance=toleration; thole=endure; thorp=village; thoughty=meditative; thraw=to be contrary; thrawn=ill-tempered; threesome=triple; throdden=increase; thwartover=contrary or transverse; tifty=quarrelsome; tilty=violent; tirly=rotatory; tozy=tender; unfurthersome=unfavorable; unheartsome=melancholy; wafture=signal; wanchance=misfortune; wandought=impotence; wanluck=misfortune; wanlust=indifference; wanthrift=prodigality; wantrust=suspicion; wasty=consumptive; wathe=injury; weald=forest; wedbreach=adultery; wee=diminutive; ween=imagine; welder=governor; welfulness=prosperity; well-will=benevolence; ill-willy=malevolence; werne=refuse; wersh=insipid; wevin=moment; whist=silence; whuffle=to doubt; widderly=contrary; wightly=bravely; wish-worthy=desirable; winly=pleasantly; witcraft=logic; witterly=consciously; wontless=unaccustomed; wood, or wode=furious; word-wanton=obscene; worksome=industrious; worrisome=annoying; wraith=apparition; wright=artisan; yald=vigorous; yeavy=moist; yeep=active; yeply=actively; yonderly=timid, or retiring; yond=distant or strange; yeme=attention.

Not only was Old English able to form compounds freely,

but it was rich and flexible in other ways. O. F. Emerson again says: "In the great epic poem *Beowulf*, which consists of less than 3,200 lines, there are nineteen synonyms for 'ocean,' nine for 'ship,' and eleven for 'sword.' These are all simple words. In addition, there are twenty-three compound words used for 'ocean,' twelve for 'ship,' and eighteen for 'sword'"—all true compounds and not made up of a genitive and a noun of which there are at least ten for the idea of 'ocean.'

This loss largely accounts for the fact that to-day we use Latin and Greek words more or less freely to express our thoughts, and in part, may be, for the slang so prolific with the youth who has these foreign words not yet at his command. Yet it is admitted on all hands that outside of books it is the genuine English words that have life and that the Englishman's deepest feelings are expressed in pure English. The "stilted classicisms" of Johnson and the "Gallic imitations" of Gibbon were never accepted by the people and are more and more repudiated by the writers of English. Marsh says that a better proof of the rich moral expressiveness of Anglo-Saxon than any citation of example is found in the fact, that those English dramatists and poets who have most clearly revealed the workings of the heart and thrown most light into the deep abysses of the soul, have employed a diction composed in the largest measure of words legitimately descended from the ancient mother of the English speech. In this inherited quality of moral revelation in Anglo-Saxon, he thinks, lies "in good part the secret of Shakespeare's power of bodying forth so much of man's internal being, and clothing so many of his mysterious sympathies in living forms."

Again, suppose a pupil does know the etymology of a word; suppose he does know the Latin meaning of *res* and of *publica;* does that give him the meaning of the word "republican" as used to-day? Is it not of more importance that he should know the force of the word in current use? The dynamic value is the all-important thing to which etymology must give the first place. Let the high school student study the English words in their natural habitat as they live among other words, in poetry and in prose, instead of worshipping their ancestors. The history of a word has little meaning for him until he knows the word in its present use, then and then only can derivation have value. Moreover, must the student worry through all the intricacies of Latin grammar with its innumerable rules and countless exceptions in order to know a little about the meaning the Romans attached to the word virtue? Some of the noblest interpretations of such words have been given by men and women who never wrestled once, neither with a Latin

ablative nor with a Latin subjunctive. This whole matter has a close analogy to the principles of the dynamic biologist, and we can agree with him when he says, "to present abstract relations to minds that know little about the things they relate suggests trying to feed babies with the combings of gray hair." James Russell Lowell says: "The pedigree of an adjective or substantive is of little value to ninety-nine men in a hundred, and the writers who have wielded our mother tongue with the greatest mastery have been men who knew what words had most meaning to their neighbors and acquaintances, and did not stay their pens to ask what ideas the radicals of those words may possibly have conveyed to the mind of a bricklayer going up from Padanaram to seek work on the Tower of Babel." And again, "the illuminate too often looks upon the stems and flowers of language, the highest achievements of thought and poesy, as mere handles by which to pull up the grimy tubers that lie at the base of articulate expression, shapeless knobs of speech, sacred to him as the potato to the Irishman."

A few years' study of Latin in the High School does not necessarily give one a command of an English vocabulary. As stated in an earlier part of the paper, many of the 24 Latin students in one class tried to interpret the Latin by means of the English and showed little evidence of having gained much, if any, etymological insight. Furthermore, a list of 30 words of Latin origin,[1] rather well known to fairly well read people yet not very common in ordinary conversation, was given to a seventh grade class, to a second year high school class, and to a college class in English. Some of the seventh grade class who had read considerably had a very good acquaintance with these foreign words and defined many of them very keenly, whereas many of the high school and of the college classes, most of whom had had Latin, showed a surprising ignorance. This little test indicates that it is quite possible to acquire a good English vocabulary without Latin and that a few years of Latin may almost totally fail to give help toward a mastery of one's mother tongue. That a child may get command of our words of foreign derivation without a knowledge of Latin is quite natural, since many of these words have become thoroughly incorporated in our language and are almost as English as the Teutonic words which our forefathers brought over from the continent of Europe. Most of the foreign words that were found in the children's vocabularies came in in very early times, and many of them came from Low Latin where they

[1] For this list I am indebted to Mr. W. Libby, Fellow in Clark University.

already had been tinged with Teutonic thought or had even been borrowed from northern races. Our words of foreign derivation, says Professor Matthews, have all of them been assimilated by the English language and we use them without giving a thought as to their foreign origin. We have made them ours, he says, once for all, and they are incorporated in our speech finally to be governed by all the rules of our own language.

This is not a philological but a psychological question. The high school student is not helped by spending a large portion of his time and the best part of his energy in, or in preparation for, "philological microscopy;" when a word fraught with meaning and emotion comes ringing into the soul it is the time to get a little life history of the word if you will, not only of the Latin, but of the home-bred and Indian as well, then it may be truly helpful. But the roots that the student finds by the long and wearisome Latin road are often not appreciated because of the company in which they are found. Moreover, language did not begin with the Latin, nor was it created in any other period of the past. It is being created now as well as in ages past. It is ever changing; and this living, ever-creating activity is of vital importance and not the burnt cinders of ages past. Whatever value they may have, they do not represent our language. Language as used on the platform and on the pulpit, by the common laborer, by the street-urchin, and by the press, as used by the writers and singers of this age—when intellect is at white heat, and passion in its very throw—that represents the language of to-day. Such language studied in the height of its activity gives us the true meaning of words. Whether the word was borrowed from Latin, from Greek, from Hebrew or Choctaw, it now is English and as English we study it; the etymology is a secondary matter. This idea was recognized by the makers of the Standard Dictionary when they placed the etymology after the definition.

It has been found again and again that modern languages are more easily learned by children than classical languages, because they are better adapted to their mode of thinking. Some of the students of the afore-named high school Latin class who almost completely failed in Latin had very good grades in German or French. It is not only good pedagogical principle to let the study of modern precede the study of the classical languages, but it often is of far greater value to the student since thus, if his school life ends with the high school, he at least "lays down tracks on which more of the traffic of later thought and life will go." It is true, by this plan most high school students will not know Latin, neither do they now with

all the effort put forth, but with the same effort they would know one or two modern languages so that they could use them for information and culture ever afterward.

It is not the aim in this paper to deny the value of Latin study, but rather to defend the idea that Latin take its place among, not above, other subjects of study. It need not be excluded from the high school, though it is a subject ordinarily better adapted to maturer students than high school beginners, but the feeling should not prevail that Latin has a peculiar educative power superior to other studies; nor should this study be forced upon the student, neither by the parent nor by the school, for the results show, in Germany as well as here in America, that such forcing proves disastrous. The writers quoted in this paper do not deny the value of the classics, but hold that the time of their dominance is past, that other studies may be pursued in place of Latin and Greek without detriment to culture nor to mental discipline, and without any sacrifice of sanity and serenity of thought. As is pointed out by many writers who defend the modern studies, it was well enough to study the writings of antiquity in the language of antiquity exclusively when the modern peoples had no literature, no language, no written history, and science had not developed. But all this has changed. But this is so well known it need not be repeated. Not only is classical antiquity accessible to us through masterful translations which give us a knowledge of the thought and the social conditions of the times better than any high school student gets by a study of the originals, but western civilization, since the time of the Romans, has produced a number of great men, in all the domains of human activity, whose works would make an excellent bible of that period. Their nearness to our present civilization makes their works in most cases preferable to those of antiquity as subjects of study in our secondary schools. And if science is questioned as being superficial and materialistic, it has long outgrown such suspicions; it has taxed, as we know, the massive intellects of a Darwin and a Helmholtz, and the idealistic optimism that prevails among our great lights of science is not surpassed by any of the students of the classics.

In conclusion, I wish to acknowledge my indebtedness to President G. Stanley Hall, Dr. A. F. Chamberlain, and Professor R. C. Bentley of Clark College, for assistance, and also and especially to those who so kindly helped me to the data in this paper.

Bibliography.

Some of the less well-known books are annotated. The others either have a title which is self-explanatory, or are so well known to the readers of this journal that they need no further comment.

1. Chamberlain, A. F. The Teaching of English. *Ped. Sem.*, June, 1902, Vol. IX, pp. 161-168.
2. Emerson, O. F. A Brief History of the English Language. New York, 1896, pp. 267.
3. Greenough, J. B., and Kittredge, G. L. Words and their ways in English Speech. New York, 1901, pp. 431.
4. Hall, G. Stanley. Adolescence. Chap. 16, Vol. II, pp. 449-560. New York, 1904.
5. Hemme, A. Das lateinische Sprachmaterial im Wortschatze der deutschen, französischen, und englischen Sprache. Leipzig, 1904, pp. 1235.

This is a sort of Latin dictionary containing only such words as have produced derivatives in German, French, and English. The German definition of the word is given first, followed by the derivatives in one or all of the above-named three languages. After the dictionary proper, are given three lists of words, German, French, and English, derived from the Latin, and a fourth list containing the Italian, Spanish, and Portuguese words which serve to elucidate the etymologies of the words in the first three lists. At the end of each word in all four lists is a definite reference to the page of the dictionary proper where the etymology is treated. The English list contains approximately 5,000 words.

6. Lehmann. R. Erziehung und Erzieher. Berlin, 1901, pp. 344.

This book deals with educational ideals and principles, the home as a factor in education, the teacher, discipline, subjects of study and different kinds of German schools, etc. In chap. viii, dealing with the last named topic, he touches the problem discussed in this paper.

7. Lexis, W. Das Unterrichtswesen im Deutschen Reich. Berlin, 1904, six vols.

These six volumes, written by experts, were prepared for the St. Louis Exposition. The work treats of the present conditions of university, secondary, common school, technical, and industrial education in the different states of the German Empire. Each section has an historical introduction and contains valuablestatistics. In Vol. I, devoted to universities, we have a general discussion of the different faculties, followed by a very brief historical sketch and by statistics of each university separately.

8. Lexis, W. Die Reform des Höheren Schulwesens Preussens. Halle a. S., 1902, pp. 436.

This work is written by a number of prominent educators of Germany and edited by W. Lexis. It is a history of, and a commentary on, the new school reform movement in Germany. The privileges of the different higher (secondary) schools, the different subjects in the programmes of study, physical education and school hygiene, the training of teachers, and other allied subjects are discussed. The general attitude is in sympathy with the reform movements of 1892 and 1900.

9. Marsh, G. P. Lectures on the English Language, First Series. Revised, 1885. New York, pp. 583.
10. McCrea, Nelson G. The Latin Papers of the College Examination Board. Ed. Rev., 1904, Vol. XXVIII, pp. 28-37.
11. Paulsen, F. Geschichte des Gelehrten Unterrichts. Leipzig, 1885, pp. 811.

This is an excellent history of higher education in the schools and universities of Germany from the Middle Ages down to 1885 with special reference to the classical languages and literature. A revised edition has appeared since 1885.

12. SCHULTZE, F. Deutsche Erziehung. Leipzig, 1893, pp. 332.
This work is mainly a discussion of pedagogical principles. In Chap. xi, in which he deals with methods and subjects of instruction, he defends the idea of letting the study of modern precede that of the classical languages, and that the former should be learned orally and not by means of grammar.

13. SCOTT, C. P. G. Number of words in English and other languages. The Princeton University Bulletin, 1902, Vol. XIII, pp. 106-111.

OBSTINACY AND OBEDIENCE.[1]

A Study in the Psychology and Pedagogy of the Will.

By Theodate L. Smith.

The standard dictionary defines obstinacy as "a stubborn adherence to a purpose, opinion, or course of action arising from conceit or the desire to have one's own way, and generally somewhat unreasonable." Unquestionably this definition covers a class of cases familiar to every one who has had much experience with human nature either in the child or the adult. From a psychological point of view, however, it is inadequate and would exclude a large mass of material dealing with inhibitory states of the will whose external effects are those ascribed to obstinacy but which have their origin in very diverse roots.[2] For the purpose of study, it has seemed best to group all the cases reported as obstinacy, willfulness and contrary mindedness under these headings, and from their analysis to seek the lines of demarcation which separate obstinacy from other states of the will. Returns collected by the questionnaire method have furnished 668 cases classified as obstinacy, 148 cases of willfulness, 341 cases of contrary mindedness and 261 cases of disobedience including an element of obstinacy, making a total of 1,418 cases, and in addition to these there were 237 cases of animal obstinacy. Many of these cases were described in minute detail and in the best of them, facts in regard to heredity, environment; physical and mental conditions were given, and the record of the child's development covered a period of several years. To sift from this material the common elements, to classify and, as far as possible, to interpret, symptoms, characteristics and incentives to the complex states which have here been grouped is the main purpose of this study; and in so far

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as it may succeed in doing this is increased the possibility of finding pedagogical principles which may have a practical application.

In attempting to tabulate the bodily reactions described as characteristic of obstinacy, it became apparent that not only were these extremely varied in different individuals but so contradictory as to indicate widely different mental conditions underlying what were described as typical cases of obstinacy. The head was described as slightly thrown back or erect with stiffened neck, and also as held down or hanging, the face as flushed and troubled, also as pale and sullen, the back as straight or slightly inclined backward or as participating in the droop of the whole figure, eyes as flashing or having a far off, blank look, muscles as rigid and tense or "limp." The teeth and lips are often mentioned as "set" and the hands either as clenched or working nervously. Actions given as characteristic during fits of obstinacy were stamping the foot, flinging the body about, tearing things, kicking, biting, scuffling feet, screaming (without tears), crying usually when the fit is approaching its end, lying down on the floor, getting limber, refusal to speak or monosyllabic answers, absolute quiet of the whole body and refusal to move or eat It will be noticed that many of these symptoms are those of anger (8), which is an accompaniment of many though not all cases of obstinacy. The anger may be either of the explosive or the long enduring, sullen type. In the cases of obstinacy entirely without anger, the only characteristic physical symptom seems to be an inhibition of muscular control so that action appears to become automatic in varying degrees. Refusals to speak or eat are undoubtedly in extreme cases, due to a physical inability to control the muscles of the throat. The following cases describe the symptoms accompanying different types of obstinacy:

A child of ten who usually did her needlework well, on a certain occasion did it badly. On being required to do it over, she became obstinate and refused to move. The command was repeated several times but instead of moving the child became very pale, set her teeth and clutched her desk. She remained in her seat during the rest of the lesson and was completely ignored. When the other children left she began to cry quietly and finally voluntarily went to her teacher and apologized but could give no reason for her behavior.

A girl of five refused to go to school and when taken there by force lay down on the floor, kicking and screaming. She refused to pay any attention to persuasion, promises or threats of punishment. As every attempt to make her stand proved a failure she was carried to another room and left unnoticed. Her crying finally ceased but she refused to do anything and sat on the floor all the morning. In the afternoon she was quiet but sulky and sat in her seat, doing very little.

A boy of five usually very ready to do as told refused to shut a door when asked because he was doing something else. His mother repeated the request but he took no notice. On being told that he must,

said he could n't. He was punished but without effect. His mother finally left the room telling him that she would come back when he had shut the door. He cried bitterly but it was half an hour before the door was very slowly closed. He was not asked to say that he was sorry but all the rest of the day he clung to his mother and was unusually demonstrative in his expressions of affection.

All readers of "Lovey Mary" will remember Tommy's spells of "getting limber" so much dreaded by those in charge of him that he was quite conscious of their effectiveness as a means of accomplishing his desires. Though not as common as rigidity of the muscles, this dead weight type of opposition was reported in a number of instances and always as accompanied by sulkiness.

In addition to the motor reactions which occur with sufficient frequency to be classified as characteristic, many children have individual motor symptoms which, to a careful observer, give warning of the approach of an obstinate fit, which can by skillful treatment frequently be avoided. One child had a way of drawling her words that served as a barometer of her mental condition to those who knew her, and with another a certain shrug of the shoulders was an index of approaching obstinacy. One teacher always anticipated trouble when she saw a peculiar smile on the face of a boy in her charge. These indications are true of animals as of children. A gentleman who owned a very intelligent and otherwise valuable horse, but which was given to occasional fits of balkiness, said that he could always foresee, and often prevent by a little humoring, an approaching fit of balkiness, by the way in which the horse held his ears and switched his tail. If the horse once balked, the case was hopeless, he never started until he was ready.

Varied as are the external symptoms reported in obstinacy, the mental states are even more varied and complex. Physical conditions, hereditary tendencies, immediate and remote environment, habit, and very nearly the whole gamut of the emotions, seem here almost inextricably mingled as factors in the production of a mental state which expresses itself in a determined persistence to do or not to do some particular thing or to act by contrary suggestion. But, however varied in their modes of manifestation, all these cases fall into either the positive or negative class, which have probably very different roots, though apparently either may be a perfectly normal development or a pathological problem.

Some cases of obstinate and persistent disobedience undoubtedly have their origin in strong instinctive desires which the child neither understands nor knows how to inhibit. The following are cases in point:

M. between the ages of three and six ran away at every opportunity, and was often found several miles from home: was punished by

being kept in bed a whole day at a time, tied in the yard, deprived of certain highly prized pleasures but without effect. Whipping also proved useless. Nor would he ever promise not to do it again: said he was sorry but *had* to go. Between the age of five or six the whole thing stopped as suddenly as it began.

The little daughter of this gentleman developed the same tendency at about the same age and he refused ever to allow her to be punished for it, though she once or twice caused very serious anxiety. As in the father's case, the impulse died out or the child became capable of controlling it between the age of five and six.

This case is of especial interest because of the element of heredity involved, but over thirty cases of persistent running away were reported at ages varying from three to twelve years. The reasons given for running away were to get to the water, which with the older boys meant going in swimming, hatred of being shut in to any defined area, and to play with other children. In the last case, two factors are involved, the gregarious instinct, and personal attraction to some individual. This deep rooted instinct for getting to the water has been studied by Bolton (4). Its strength even in young children is well illustrated by the following case:

Marita, four years old, had been forbidden to go near a little brook which ran back of the house. Nearly every day she had been forbidden to go there and punished for it, but she continued to disobey and to come back each time black with mud. One day she had been taken away from the brook several times and was finally told that she would be whipped if she went there again. She went, at the first opportunity, and was severely whipped. After being freshly dressed for the fourth time that day and warned against going to the brook, she managed to escape surveillance and went straight to the brook. She was again punished, and when her mother asked her why she persisted in being so disobedient, she answered with a sob, I *want* to mind you mama but I *can't help* going to the brook.

Another case of persistency in doing a forbidden thing, which seems to have a strong instinctive element, is the tendency to pick growing things, which in some children seems so deep rooted that it practically is impossible to inhibit it until the child reaches an age at which it can be made to understand the rights of property. There were few instances in which this tendency persisted beyond the age of four years.

In addition to the persistency which arises from racial instincts, there are individual tendencies which appear to be so deeply rooted that no amount of opposition or external restraint seems sufficient to control them. To one boy, horses, and to another, machinery were so attractive that prohibitions, threats and punishments alike proved useless whenever opportunity for indulgence of the inclination was offered.

Among the cases of obstinacy reported in connection with school discipline the negative far outnumber the positive, as would naturally be expected from prevailing conditions. The

average child adapts himself to routine with difficulty, and school often means a clash with the child's natural interests so that a fairly well developed power of control on the part of the child is requisite for his acceptance of the usual requirements. The child who enters school with little or no home training in self-control will, in most instances, present a problem for the teacher, and when this is complicated by hereditary predisposition, unfavorable nervous conditions, and frequently mal-nutrition, the difficulty and complexity are greatly increased. In American schools, teachers rarely have much knowledge of the home life and surroundings of the children they teach except what is indicated by the child himself, but from the papers received from English training schools, it would appear that this is part of an English teacher's duty, as in most of the cases definite information in regard to the child's home surroundings and training is given. From the English Board Schools many cases of refractory children are reported in which it is recognized that insufficient food or, in some cases, actual hunger, were factors affecting the child's mental condition. Quite as clearly emphasized were the effects of pampering the appetite or over-indulgence in sweets or too rich food. Disorders of the stomach and liver are frequently mentioned as a predisposing influence in children who have a tendency to obstinacy and sometimes as the direct cause of a temporary attack of contrariness in children who are ordinarily sweet tempered and well trained. Other physical conditions which were mentioned as furnishing a soil on which obstinacy and contrariness thrive were eye strain, ear trouble, anæmia and fatigue (14). Mentally deficient children were in a number of instances reported as exhibiting extreme forms of obstinacy and the only cases considered as hopless. In about one-fourth of the whole number of cases heredity or innate disposition was stated and reasons for inferring hereditary influence were given in many more.

The following extracts are typical of this class of cases:

F., 23. Has always had an instinct of stubbornness. It is aroused by disappointment or opposition. The state of the weather often induces it without other cause.

F., 10. A child of peculiar temperament and subject to obstinate fits. Her face became white and set but she was very quiet. Neither corporal punishment nor kindly reasoning had any effect. The case was finally referred to a physician.

M., 7. Had fits of unreasoning obstinacy in school, the outbreaks were frequent and violent and he really seemed unable to help them. After such attacks he was usually a shining light in his class. His sister had similar attacks and the father is reported as having a very contrary disposition.

M., 9. A singularly obedient and affectionate child, rather slow in his motions and dislikes to be hurried. Rather slow mentally but

intelligent and has a good memory. But he occasionally makes up his mind that he won't do a thing. He is perfectly pleasant about it but no one has ever succeeded in persuading or forcing him to do the thing he has made up his mind not to do. He apparently makes no resistance but carries his points somewhat after the fashion of the Japanese *jui jutsu*.

Among the most frequent occasions of a fit of obstinacy is a feeling of injustice. This was reported in a large number of the observed cases and emphasized in the reminiscent returns:

A boy of ten was unjustly accused of having mislaid a certain key and his word questioned when he said that he had not. He went to his room and remained there all day, refusing to come to meals or to answer except in monosyllables. The key was found where another person had put it and an apology offered to the boy but he refused to be appeased. The next morning he came down as usual and acted somewhat ashamed.

F., 7. A bright child with a keen sense of honor. On one occasion her work was careless and in reproving her, her teacher implied that she had taken advantage of previous praise. Her muscles stiffened and she remained like a statue for the rest of the afternoon, refusing to speak or move. Was forcibly moved but remained just as she was placed until after school. Kindness finally overcame her resentment.

F., 19. As a child, was subject to fits of obstinacy, any hint of injustice invariably producing them. Even at the present time if any hint of injustice is accorded her, becomes stubborn and refuses to hear any explanation: can neither explain nor help this feeling.

Sometimes a chronic state of obstinacy may be established in relation to a certain individual, usually because the subject is thwarted or misunderstood, while the mental attitude towards others is quite normal, or in sensitive natures that feeling of injustice and resentment which is at its root may be extended to the world in general and produce a morbid feeling of opposition to the whole environment. Some of the reminiscent returns so well describe the mental state during a fit of obstinacy that one or two are quoted in full.

F., 23. As a child occasional fits of obstinacy used to assail me. When about eight years of age I was required to do something much against my will. I refused to do so, and walked out into the garden and sat upon a block of wood in a piercingly cold wind. First I was commanded to go in and do as I was told, but I was mute. Then they tried persuasion, and to that I was impervious. Finally they left me entirely alone for two or three hours. All this time I felt a much injured mortal, and every one else appeared hard and unsympathetic. I was speechless, my teeth were clenched, my face was pale. It was cold, but I did not care. It was past dinner time, but I could not have eaten had I tried. My head ached, and all kinds of thoughts flew through my mind with marvellous rapidity. After an hour's loneliness I began to wish to give way but I could not. Then after a long time mother came to me and spoke gently as if nothing had occurred and I at once was all contrition. These fits of obstinacy always left me very tired and exhausted, and I always had a very bad headache, and felt generally very low spirited for a day or two.

F., Adult. (At twelve years). One of the most miserable recollec-

tions of my life is of a fit of obstinacy whose original cause was so insignificant that I have forgotten it. My mother had told me to do something which, for some reason, I felt disinclined to do. My father overhearing my refusal sent me to my room until I was ready to do as asked and to apologize for rudeness and disobedience. I worked myself into a perfect frenzy of injured feeling. I hoped that I would be ill and die so that my parents would regret their unjust treatment. My parents were unkind and I was the most miserable being upon earth. As the day wore on, I began to wonder how long my father would keep me up stairs, for I had not the slightest idea of giving in and neither had I the slightest thought of disobeying his injunction to stay in my room. My dinner was sent up to me but I could not eat. I had cried until I was faint and nauseated. It was an interminably long day and when twilight came I was very lonely and miserable. I wanted my father and mother. I wished things had n't happened but still had no thought of ending the situation. My universe seemed blocked, but still the idea that the end of the matter lay with me did not come. The situation seemed impossible and yet had the awfulness of fate about it. Then the hurt look on my mother's face came before me. I began to feel sorry. But to go down stairs and say that I was sorry because I had been told that I must, that was impossible. Then it began to seem as if I could n't bear it any longer. I *was* sorry but I could n't say so. Just then my mother came in and put her arms about me and in an instant my trouble was ended. It would have seemed as impossible not to say that I was sorry as it had seemed impossible to say it the moment before.

In both of the cases just quoted it is observable that a long time elapses before the idea of doing the thing required comes before the mind at all. Though both begin with a refusal to do something the starting point seems to be lost sight of and swallowed up in a feeling of injury which paralyzes the will. The mental state is predominantly emotional. Anger, hurt pride, grief, loneliness, feelings of injury and injustice so completely dominate the mind that there is no room for the entrance of other ideas. In other cases the whole energy of the will seems concentrated in an "I won't."

M., 10. A case of pure obstinacy without anger. The child was not usually obstinate. Absolutely refused to move in line (afterwards said a boy kicked him but the original cause was forgotten). Kindness, firmness, shaming and sympathy all failed. Janitor carried him up stairs. Obstinacy continued 70 minutes. Finally broken by a request in a quick tone to do something for the principal. A series of such requests seemed to release his will power. Said he was sorry and would not do so again.

In the two reminiscent cases the crises is almost wholly of an emotional character while in the case just quoted it is brought about by a sudden change of ideas. We have here two distinct types, in one of which the obstinacy appears to be the result of a temporary paralysis of the will due to an inability to get a certain idea before the mind and in the other of a cramp of the will due to the presence of a fixed idea of refusal even though the original cause may have faded into the background of consciousness.

In many instances a fit of obstinacy is simply a rebellion against a *must*, the particular thing required being a matter of indifference. This may be due to a failure or refusal on the part of the child to recognize the authority of the person issuing the mandate or to an undisciplined assertion to the right to freedom of action which is instinctive in every normal child. Since the idea that liberty exists only through law is not developed except through experience, these rebellious attitudes of early childhood seem to be perfectly normal for that age, though their continuance in later life may be regarded as due to a lack of discipline or as a case of arrested development. The following case is so typical of these early struggles of childhood that it is quoted in full.

1. F., 24. "Baby's" nurse being busy, her aunt took the child to her room, while she dressed for church. Baby wandered round until she spied a bag filled with buttons of various sorts and sizes. "Baby wants the buttons,—mother's buttons," announced the little one. They were given to her, and Baby sat on the floor, and turned them all out with great glee. She piled them up in little heaps, and then with a sweep of her hand sent them flying all over the floor.

In a minute or two she got tired of the buttons and began again, "Baby wants the tic-tic."

Baby must pick up the buttons," said her aunt in a firm voice. "No, said the child, "Baby won't pick up the buttons." Baby had risen to her feet, all smiles, and began, "Baby does not want the buttons any more,—take baby out."

"But the buttons, dear, what will mother say? see they are all over the floor, put them in, quick."

"Baby placed her hands behind her back, and pouted her lips. "No, Baby won't put them in."

"Then you are a naughty child, and I shall put you in a room all by yourself," said her aunt.

And without another word she caught up the child and carried her into the next room, shut the door leaving her on the floor by herself. Of course Baby cried lustily, at such unheard of behavior.

Her aunt completed her dressing, and then went for Baby. Baby will pick up the buttons now said her aunt, placing the child on the floor beside them. But Baby only sobbed piteously, and absolutely refused to do anything of the kind. In despair, her aunt took off her gloves, and carried Baby back again to her room. Three times this programme was gone through, and at last Baby worn out with the unequal struggle, stooped down and consented to pick up the buttons. At last they were all in *but four*. Baby stood up, "All in," she exclaimed. "No, they are not all in, put in the others, dear," said her aunt coaxingly.

"All in," said Baby once more, in a decided tone, not attempting to pick them up. Poor Baby. her lips were trembling, and a stifled sob burst from her shaking little frame.

"All in," she repeated, "Baby wants to kiss you," said the child in a coaxing tone.

"Well, put in the rest, darling, and then you shall."

Dead silence,—there lay those four wretched buttons, and there stood Baby, regarding them fixedly.

Her aunt turned her back, and walked to the window. In a moment Baby picked them up. "All in, all in," she sobbed—and they were.

A large number of cases were reported as obstinacy which involve a very different problem of the will from any of the preceding. The following are examples:

A child of five, on first being sent to school, refused to stand up or take any part in the exercises when called upon to do so. This lasted over a month (child delicate, nervous, and very shy).

Another child, still younger, refused to answer to her name at roll call for six weeks after entering school. One morning a teacher with a very gentle voice called the roll and the child answered. The first teacher spoke in a quick, energetic tone.

A boy of eight refused to take some nauseating medicine, cried but did not show temper. Neither coaxing nor punishment availed to make him take it.

Numerous cases are also reported in which children have persistently refused to eat some article of food which was especially disliked. In all of the above instances, a strong effort of the will is required to overcome either timidity or a strong physical repugnance, and a failure to do this is certainly not obstinacy in any usually accepted sense of the term, though both may be due to a weakness of the will and have the same objective manifestations.

Another class of cases reported as extreme types of obstinacy are those in which the child has some unrevealed reason which furnishes a strong motive for persistency in a certain line of conduct. Often children cannot explain this because they lack the power of expression.

A little girl of five years refused one night to say her prayers and could not be persuaded to do so. The refusal was continued on subsequent nights, and after exhausting her ingenuity in trying to overcome it the mother wisely concluded to let the matter alone. After three months the child suddenly kneeled one night and said her prayers but the mother did not discover the explanation of the child's refusal until months later. She had in some way gotten the idea that by repeating the words "If I should die before I wake," she was incurring the danger of dying in her sleep.

A case of similar refusal on the part of a child a year younger was reported from England but the explanation had not been discovered. It would be interesting to know if the similarity was continued in the child's reason for refusal.

F., 22. Remembers a fit of obstinacy when she was between four and five years old. Refused to say the letter *d*, the reason, as she remembers it, being that it stood for dunce and she somehow thought that this reflected upon her. Was sent to a corner by her father but would not speak and was finally sent to bed. Made up her mind that conflict with authority was too much effort and mentally surrendered. Was surprised some years later to hear her father tell the story and say that she was victorious.

Cases of this class are for the most part recorded as reminiscences, but it is probable that at least a part of the observed cases of unexplained obstinacy in children who do not ordinarily resist lawful authority, are to be accounted for in this way.

Several cases of conscience are also reported where a child has suffered severe punishment rather than break a promise, the case appearing to adults as unexplained obstinacy. In this group also should perhaps be included a few cases of secret childish vows, though these have a touch of morbidity about them so that they might equally well be classed as pathological.

Contrariness. Very closely allied to obstinacy is that form of perverse will which is designated as contrariness and which may be either temporary or chronic. The latter is, perhaps, always more or less pathological, and according to the majority of reports received, physical conditions play a large rôle in the former. Stomach and intestinal disorders, eye strain, malnutrition, ear trouble and nervous disorders are most frequently mentioned in this connection. Several papers describe chronic contrariness as existing in connection with epilepsy and greatly increased just before an attack. Clouston (6) also notes this among the characteristic symptoms of epilepsy. The early years of adolescence are often attended by spells of contrariness and these, for the most part, seem to be simply a part of the general ferment and readjustment which belong to that age and are a passing symptom. This is also true of those cases which develop at the climacteric. But not all cases of contrariness are to be ascribed either to heredity or physical conditions. Numerous cases of perfectly healthy children were reported as typical cases of contrariness. When any cause for this was assigned, it was invariably "bad training." The explanations also show that a definite kind of bad training is associated with contrariness in a healthy child. While it is quite true that some children are born contrary and, at least during their early years, have outbreaks under the wisest system of training, it also appears to be true that a course of indulgence alternating with unreasoning severity, when the child becomes troublesome, is apt to develop contrariness in children who under a just and kindly system of government exhibit no special perversity of will. In some of the adults described as chronic objectors, it is claimed that early circumstances had much to do in developing this disposition though there is usually also a hint of hereditary tendency. The following examples illustrate the different forms of contrariness.

Children. M., 5. Would do things he disliked to be contrary. Will even refuse candy if asked to have some, but if any one suggests that he is not to have any, immediately wants it.

M., 4. Was usually cross early in the morning, and when greeted by "good morning" would reply "t is n't good morning." This seemed due to a physical condition, for after breakfast he was agreeable for the remainder of the day.

M., 4. Usually sweet tempered but about once a month has spells when he is contrary and irritable.

F., 2½. Extremely contrary when coming down with measles.

F., 3. Extremely contrary until about three years old. Was very delicate. Improvement in health was accompanied by a disappearance of the contrariness.

F., 2½. Has spells of extreme contrariness. Is allowed to eat what she pleases and her stomach is frequently out of order.

M., 3. Whatever is suggested to him says "no" in a whining way. Is perfectly healthy. Alternately indulged and spanked.

M., 3. Is contrary for the sake of teasing. Showed this disposition before he could talk.

M., 6. Has been contrary from babyhood. The easiest way to get him to do anything is to suggest the opposite. Inherits the disposition. His health is apparently good.

F., 7. Has been subject to contrary spells all her life. During the last year these have greatly increased and symptoms of epilepsy have developed.

Adults. M., 45. Usually pleasant, but very contrary when business affairs are troubling him.

M., 40. Always says "no" to his children's requests or gives only a grudging assent. (Heredity.)

F., 42. For two years was very contrary minded. If her little daughter wished to do anything, she invariably told her not to do it. In conversing with people always took the opposite side. The cause was nervous prostration and the contrariness disappeared with the disease.

F., 28. Epileptic. For a day or two before an attack is very difficult to get along with. Objects to everything that is done for her.

F., 26. Has spells of contrariness when she is nervous or tired or has been confined in doors for a long time.

M., 60. Always on the off side and ready for a dispute.

F., 21. I often feel a tendency to do the opposite of what is suggested, even though the suggestion is a friendly one. I have a friend much older than I of whom I am very fond, but she seems unconsciously to bring out all the contrariness in me, and she once laughingly remarked to me that I brought it all out in her. If she suggest something I have a wild desire to contradict her.

M. A man of about middle age. He is a chronic objector—contradicting whenever possible, and very often when no objection can be made. Picks flaws and so magnifies them that the original point is quite lost. Is ignorant, but always has an opinion on every subject and will contradict a specialist in any line.

Young man of Dutch birth. Mother a meek submissive woman; father noted for unflinching steadiness of purpose and total disregard for the opinions of others. His boy-life was embittered by attempts to free his will.

F., 40. Has periodic contrary spells which she finds it very difficult to control. At such times feels an impulse to object to anything suggested no matter what it is. Feels that the best thing is to stay alone until she gets over it.

M., Adult. Had little sympathy either at home or school during his boyhood. The home atmosphere was one of contention and the children alternately indulged and treated with severity. When he left school and went to work, he was somewhat isolated from those of his own station. Became a rather morose man, with a tendency to take the off side on every occasion. He married a woman of warm positive influences and has very greatly improved. She is always careful not to directly cross his wishes but laughs his "no" into "yes" or coaxes him by indirect influences into another frame of mind.

The Obstinacy of Old Age. The obstinacy and contrariness which frequently characterizes old age, and of which 173 cases were described, seems to be due, in large measure, to force of habit (7). Like the muscles, the mind seems to lose its flexibility with advancing years, and habitual ways of thinking or of doing things become so automatic that change is difficult or impossible. Fixed ways of doing particular things, habits of dress, preferences for certain kinds of food and adherence to opinions, simply because they have been held until they have become a part of the mental life, are characteristics that are too well known to need description. Along with, or as a part of, this fixation of habits of body and mind is usually developed a dislike of change simply as change rather than because of any quality inherent in the thing which may be in question. Another element likewise often enters into the obstinacy or contrariness of old age. The idea of advancing feebleness and a dread lest one's right of decision should be called in question often induce what appears to be an unreasonable contrariness in the old, and the greater the consciousness of failing powers, the more keenly is this felt. Old people are often extremely sensitive in regard to anything which seems in the slightest degree to threaten their independence. As the memory begins to fail early associations are recalled much more clearly than later ones and assume relatively greater importance. Hence the clinging to old familiar places and customs which seem inconvenient and uncomfortable to others but which have a very real value to the old because they contribute to a feeling of the integrity of personality which is diminished by new surroundings and unfamiliar ways.

An old lady had a small clock in her bedroom which she would allow no one else to wind even when she was ill. Also refused to take certain nourishment ordered to keep up her strength.

M., 80. Is fond of relating events which have happened to him and through failure of memory often makes mistakes. If corrected, will always insist that he is right. Will not admit it if he falls to sleep when some one is reading to him.

An old lady is noted for her perversity. One evening she said she was tired and guessed she would go to bed. As she made no move, fifteen minutes later her daughter gently suggested the same thing. She was instantly irritated and said she guessed she knew enough to go to bed when it was time.

An old lady who was ill was ordered by the doctor to have a fire in her room. She refused, saying that she never had had one and was n't going to begin now. The nurse obeyed the doctor's orders, but as soon as the doctor was gone, the old lady made her put it out threatening to do it herself if she did not.

Two old ladies who keep school are very antiquated in their methods of teaching. They acknowledge the efficacy of more modern methods but do not change. Say that they have always done that way.

M., 80. Persists in wearing shabby clothes, though he has plenty of good ones. Brings neckties, which are fit only for the rag bag, to his daughter and insists on having them mended.

F., 75. Will not allow her nieces, who do their own sewing, to buy a sewing machine: says it is laziness to want one. *She* never had one.

F., 85. For the past twelve or fourteen years has promised her daughter to move into a more convenient house but when it comes to the point always refuses to do it, saying I can't find a house like my own.

M., 82. Always persists in wearing his hat in the house in spite of remonstrance.

Institutional Obstinacy. In studying the returns, attention was attracted to the frequency with which cases of obstinate rebellion occurred under extremely strict or mechanical rule, whether in home or school discipline, and this led to a further investigation of such conditions. Information has been sought from superintendents and others connected with institutional work to find out, if possible, how far this tendency is general and if it affects all or only a part of those brought under a system of fixed rules. The problem is, of necessity, a complex one, since many of those who come under institutional discipline are of degenerate stock and the condition of their nervous systems is such as to make rebellion against rule and uniformity almost inevitable. The question "Do you think institutional life has a tendency to develop obstinacy?" has received a variety of answers. Some have given an unequivocal "yes, in all children," others have qualified the answer by saying that an original disposition to obstinacy was increased by institutional life, and individual cases have been reported in which obstinacy has greatly diminished or disappeared after entrance to an institution. There proves, however, to be no fundamental disagreement in these answers, since the beneficial effects were invariably found to be due to *individual* treatment and influences. There is, moreover, a marked correlation between the degree of strictness and the frequency of obstinacy. In two reformatories for girls, a greater amount of freedom has resulted in a betterment of discipline and a decrease of obstinacy. The late Mrs. Johnson, former superintendent of the Sherborn prison, fully recognized the psychological effect upon the prisoners of living under rigid rule, and said that it was not an uncommon thing for prisoners, after months of good behavior to have a sudden outbreak, refuse obedience to the matrons, and lose the good conduct badges and privileges which they had gained by slow degrees. It occasionally happened that she was able to foresee and prevent such an attack by her personal influence with the prisoners. There seems, on the whole, strong evidence for the view that institutional life, in so far as it is rigid and mechanical in system, has a tendency to develop obstinacy in either children or adults and that it is only in so far as institutions are deinstitutionalized and the individual rather than the institution considered, that the best results in moral training are attained.

Animal Obstinacy. In the questionnaire returns 237 cases of animal balkiness were described with varying degrees of detail. These include horses, donkeys, mules, cats, dogs, pigs, cows, oxen, birds and a few of the smaller wild animals which have been tamed and partially domesticated. The training of an Angora kitten furnished material for a continuous individual study. An opportunity also occurred during the summer for the study of several balky farm animals.

As in the case of human obstinacy, the conditions underlying animal balkiness were found to be varied and numerous. The most important factors traced were fear, instinctive desires, against the interference with which balkiness is a protest, that which in the animal corresponds to a sense of justice in human beings, fatigue, physical repugnance, habit, hereditary influences and physical disorders. Habit here works in two ways. Interference with firmly established habit may produce balkiness, and an animal which has once balked is more liable to do so again whatever the original cause may have been. Animals, like human beings, are also often sensitive to particular states of the weather and balkiness is more liable to occur when the weather exerts an unfavorable influence upon the nervous system. Bostock (5), the well known animal trainer, has observed this and says "Damp, muggy, weather makes lions seemingly depressed, and in this state they are doubly unwilling to do anything they do not feel inclined to do." Some of the other facts which he states have so direct a bearing upon the problems involved in obstinacy that they are here quoted. Of animal characteristics he says, the tiger is feared for a tenacity of purpose which when once aroused is almost unconquerable.—Lions have no affection; they become used to, and tolerant of, their trainers and their obedience and docility is partly, if not wholly, due to ignorance and to the dread of anything they do not comprehend.—An animal learns by association. Though it is a common belief, fear is not the reason for obedience to his trainer's commands. Habit and ignorance are what cause the animal to become an apt pupil in the hands of his trainer. One of the greatest factors in training is to secure prompt obedience from the animals, not only at the beginning but always.—I have seen trainers spend hours and sometimes a whole day insisting on an animal's doing some little thing; it may not be used in the performance at all, but it is a matter of obedience and it must be insisted upon no matter at what trouble or cost. Once let an animal off his performance and it generally means that he expects and insists on giving no more exhibitions at all. One more paragraph of interest in this connection is the peculiar change in the animal's disposition called "going bad." "The thing most dreaded among animal trainers is the change

of temperament on the part of the animal known in menagerie parlance as going bad. Lions are likely to go bad about the tenth year of life, tigers two or three years earlier. The going bad may come in the nature of a sudden attack or it may develop slowly and be counteracted if taken in time. Sometimes this bad temper will last but a short time and again it will become the permanent condition of the animal. He is then useless for performances and never recovers. Elephants also go bad, but there seems to be no special age for this, but in the majority of cases these animals become dangerous after a certain time in captivity." In this characteristic of elephants there is strong suggestion of a parallelism with institutional obstinacy. These few paragraphs indicate something of the problems presented to the animal trainer. To be successful he must understand both the family and individual characteristics of the animal he is to train. He must carefully watch the physical conditions, since it is unwise to require any performance of an animal even slightly indisposed and he must, though avoiding occasions for balkiness, always insist upon obedience, but not through fear. In the training of domestic animals the problems are similar, though the scale of intelligence is higher and many of them are capable of a high degree of affection which, according to Bostock, the larger wild animals do not possess. In training the Angora kitten above mentioned, balkiness was soon encountered in both the positive and negative form. The kitten was intelligent and readily learned to kiss, to sit up and beg, jump through the hands or over a cane and do a trapeze act at command. She seemed usually to enjoy her lessons and not infrequently did her little tricks without command. She also soon learned that climbing up lace curtains and sharpening her claws on furniture was not permitted and would stop when spoken to in a certain tone. She was, however, extremely persistent in the gratification of these instincts when not watched. She soon learned to associate the disagreeable experience of drops of cold water descending upon her nose with this gratification and after the association was well established, simply leaving a glass of water near the forbidden objects was usually sufficient to prevent the action. If it was forgotten the instinct was gratified. No attempt was made to inhibit the instinct of sharpening the claws but only to restrict it to a certain place. The force of habit came into play here and the special place became a complete protection to other articles of furniture. The first distinct instance of balkiness occurred when the kitten was about eight weeks old, when she refused to kiss a certain gentleman who had picked her up. It took twenty-three minutes to secure obedience. She was not hurt in any way but firmly held and the order repeated from time

to time until it was finally obeyed after a protesting mew. As soon as released she ran and hid. In this case the cause of the balkiness was probably a physical repugnance to the odor of tobacco to which cats usually show an intense dislike. Too long continuance of a lesson was also likely to produce balkiness which could not be attributed to fatigue of the muscles used, as frequently, in the case of jumping, the same form of activity was continued after the cessation of the lesson.

Interference of associations also produced an inhibiting effect. The worst time for giving a begging lesson was when the kitten was really hungry, whether or not food was in sight. The natural movements of standing up and reaching were made, but it was almost impossible to secure the artificial position with the paws dropped. It was also much more difficult to secure obedience if the lesson was given in an unaccustomed place. On the negative side or balkiness persistent refusals to obey occurred from fatigue of attention, physical repugnance, interference of associations and interference with habit. Any attempt to change the details of a required act was usually met with a refusal to do it at all. On the positive side persisting in any particular course of action was due to strong instinctive desires.

Animal obstinacy is less frequently associated with anger than in human beings though some cases are reported of dogs which show fight if forced beyond a certain point, and there is always danger in the case of wild animals. The physical symptoms of both anger and obstinacy are similar, rigidity of muscles being the most marked expression of obstinacy.

Pathological Cases. It is as difficult to draw any fixed line between pathological and normal cases of obstinacy as between sanity and insanity though some of the cases reported are undoubtedly on the pathological side.

F., 5½. Refused to say please for a glass of water. Was told that she must say it before she could have a drink. The child was left with a glass of water in sight and told that she could have it as soon as she said please. Refused until her health was in danger. A physician was called and advised keeping her quiet and leaving her entirely alone. She finally yielded.

Two little girls who were great friends entered into a playful contest as to which should reach a much desired seat at the beginning of term. For a day or two they avoided each other though still in a half playful spirit, though a desire not to give in was now awakened. The feeling grew until the matter became serious and a word could no longer break the spell. They grew apart and had nothing to do with each other though in the same class. This continued four years, until a third girl, not knowing how matters stood, became attached to both. A sudden illness of this girl compelled them to speak to each other, and the spell was broken. They became friends again but neither ever tried to explain the strange separation.

In some of these cases there seems to be a cramp or paralysis

of the will so that it refuses to act even though the desire to act may be present. Miss Wilkins (15) has given an excellent description of this type of diseased will in her story of the man who for years sat on the church steps during service, refusing to enter because of a church quarrel, knowing that he made himself ridiculous yet unable to give in and impelled by a New England conscience to go as far as the threshold. This form of diseased will differs from the typical cases of abulia described by Ribot (11) in being restricted to a special act, while in abulia the inability to act may occur in regard to any situation. The gradual fixation in a course of action never deliberately and consciously adopted which is illustrated in one of the above cases has been vividly described by Hawthorne (9) in the case of the man who one day stayed away from home in a half jesting mood to see how it would affect his wife. Each day he meant to go home, but lived for years in sight of his wife and home, avoiding recognition and bound by a spell which he daily became more incapable of breaking. Yet a careful study of these extreme cases of diseased will leads to the conclusion that they are but exaggerations of those which are met with daily, and that obstinacy, in its nature, is due to weakness and not, as is often popularly supposed, to strength of will. Since the definition at the beginning of this paper was rejected as inadequate, it is necessary at this point to offer at least a tentative definition which will serve to draw some lines of demarcation in the material dealing with states of the will which has here been collected. The points which have appeared essential characteristics of obstinacy, apart from the great complexity of mental states with which it is associated, are persistency, egoistic assertion, and revolt against authority in some form either personal or impersonal. If obstinacy be defined as a persistent egoistic revolt against authority, in the wider sense of the term, it limits it to a definite characteristic attitude of the will, without, however, any attempt to limit the emotional and intellectual factors which may accompany or induce it, and which investigation has shown to be so varied and so complex. Under this definition it is evident that some of material in the preceding sections must be classified otherwise than as obstinacy.

That obstinacy is due to weakness rather than strength of will is indicated not only by the fundamental fact that it is characterized by a loss of muscular control either in the form of rigidity or partial temporary paralysis but by the numerous reminiscent returns in which the writers acknowledge that they have wished to yield but could not, by the evident relief shown by some children when they have been helped to overcome the apparent obstruction of the will, by the frequency of attacks

of obstinacy in young children whose wills are normally weak, by the fact that it is a frequent characteristic of the feeble minded (2), by its frequent association with physical ailments or hereditary degeneracy and by the study of pathological cases. From this point of view occasional attacks of obstinacy during the early years of childhood may be considered as perfectly normal. All healthy children are egoistic, and in finding the limitations of their own personalities they naturally come into conflict with authority. Their wills are largely impulsive and emotional and their instinctive desires strong; and moral, like bodily control and independence, is learned at the cost of some pain and collision. The frequency and duration of these struggles against authority depend both upon the natural disposition and the training which the child receives. For children in whom the feeling of personality is especially strong, the acceptance of law is harder, but self control, when once acquired, is proportionately more stable. It must be recognized, also, that some children are born with a tendency to balk at restraint and that such children need special care and help in gaining self-control. The returns show that such a tendency may exist in either strong or weak-willed children, and that the method of treatment to which the child is subjected has much to do with its development or control.

Since obstinacy is so frequently, though not always, associated with disobedience, in discussing the treatment of obstinacy, the question of the training of children in obedience seemed a necessary correlate and answers to the following questions were collected :

"How have the most obedient children you have ever known been trained? Describe concrete cases, giving other characteristics of the child; whether timid or courageous; truthful or untruthful; affectionate or the reverse; weak or strong willed.

"What is your mature estimate of the value of training in obedience on your own character? How were you trained, strictly or otherwise?"

To the first question 113 answers were received, chiefly from English sources, nearly all of the American papers omitting the question. The second received 366 answers. The word obedience received a variety of interpretations, from mere outward conformity to authority with inward rebellion and from motives of fear or policy, up to a complete harmony of the inner disposition, with external requirement recognized as embodying a moral principle. This last and highest form is, of course, possible only for older children. Very little children obey chiefly through habit and association, and for them the conception of law is limited to parental approval or disapproval. Miss Shinn (12) writes of her little niece at the age

of one year: "She had not an atom of moral sense nor the least capacity of penitence or pity." But though the moral sense is undeveloped, the raw material of morality, to use Sully's phrase, is present and training may begin long before there is any intelligent response on the part of the child. Preyer (10) thinks that such training cannot be begun at too early an age, and thus summarizes the results of his observations. "Exercises in being obedient cannot begin too early, and I have, during an almost daily observation of six years, discovered no harm from an early, consistent guiding of the germinating will, provided only this guiding be done with the greatest mildness and justice, as if the infant already had an insight into the benefits of obedience. By assuming insight in the child, insight will be earlier awakened than by training; and by giving a true and reasonable ground for every command, as soon as the understanding begins, and by avoiding all groundless prohibitions, obedience is made decidedly more easy. Thus, through cultivation of ideas of a higher order, the will may be directed even in the second year and character thereby be formed; but only through an inexorable consistency, which allows no exception to a prohibition, is it possible to maintain the form once impressed upon the character." Preyer's view is very fully corroborated by the questionnaire material as the following extracts, condensed from more detailed descriptions, show.

F., 21. The most obedient children I ever knew were trained to obedience from earliest infancy. Their mother always said that she taught them to obey as soon as they knew anything at all. These children were courageous, truthful, very affectionate and possessed of very strong wills and yet are always to submit to any one in authority. The eldest girl is I think influenced largely by her affectionate nature. Opposition from her friends is always a distress to her but does not turn her from what she believes to be right now that she is older.

F., 23. The most obedient child I know is a boy of eight, an only child, firmly but lovingly trained, told not to do things because they were wrong and would grieve his parents.

F., 27. The most obedient children I have known were trained to obedience from the first hour of their existence. They are strong willed and courageous. Their obedience is cheerful and they have always felt sure of justice and sympathy. The most disobedient child I know is strong willed and courageous but untruthful. His mother has not insisted on obedience when she has told him to do something and has not always kept her word to him.

F., 24. At a small country village where I have stayed every summer for some years, lived a very large family, mostly boys. I have never seen a more obedient family in my life. At the least intimation of an order given by their mother, off they ran to obey it. It may seem peculiar, but the mother of the family was not at all strict with the children. They seemed to do all they wished provided they obeyed orders. These children living in the country, were very courageous; due partly, perhaps, to their up-bringing. They were afraid of hardly any one, and while out at play did the most daring things.

They were all extremely truthful. I noticed that some of them were very affectionate to strangers, but some were exceedingly the reverse. Among the children there existed a very strong affection. They were all very strong willed.

F., 24. The most obedient children that I know are my sister's six children. From their earliest days they are kept quiet and are trained to regular habits of sleeping, nursing, etc. Their mother tries to avoid things which may cause rebellion, but if the rebellion comes, the child must yield.

F., 19. The most obedient children I knew belonged to a family who lived near us. The mother was dead, and the father himself managed all affairs. He was an old soldier, and a very firm disciplinarian. Consequently, his children were trained in habits of the most perfect obedience, and were accustomed to obey their father promptly without any questioning.

To a casual outsider this would appear very well, but on the children the effect was not good.

Before their father, and indeed before any one placed in authority over them, they were timid and scared, and have been driven sometimes to telling untruths in order to escape their parent's wrath.

In school these children were not generally liked, they were accused of being deceitful and underhanded, and, as far as I could see, this accusation was not far out.

This last case is typical of results where outward conformity, due to fear of punishment, seems to have been the chief factor in training.

In reviewing the 113 cases of obedient children described, a few fundamental principles stand out clearly and these are still further emphasized in the reminiscent returns. Too many rules and too strict discipline are not conducive to true obedience, if this is considered as an inward recognition of, and not mere outward conformity to, law and authority, regardless of motive. For this result a certain amount of freedom is necessary. A child, all the details of whose existence are under rule, has no opportunity for the development of self control without which there can be no true obedience. The bad effects of too many and too strict rules vary somewhat in accordance with the natural disposition of the child. In timid children there is apt to develop a tendency to deceit and untruthfulness, especially where corporal punishment is the rule. In strong willed and courageous children the result is often obstinacy and rebellion and a conflict in which, though the child may be forced to submit, there is left a rankling sense of injustice. In really weak willed and suggestible children, such a course of treatment seems in some cases to produce an actual arrest of will development, and the obedience itself is dependent upon the immediate influence of authority. On the other hand, a will which never encounters the check of law and authority in opposition to its own desires must also suffer loss, for probably a child's first lessons in conscious self control are learned in the clash between its own instincts and desires and authority (1).

It is undoubtedly good pedagogy with young children to avoid conflict and divert attention from a forbidden object and so avoid impressing the thing forbidden upon the child's mind, but it is also possible to err in this direction quite as much as in the opposite one of too arbitrary an assertion of authority. A very young child cannot be given the reasons why certain things must and others must not be done. But he can readily learn to understand the approval or disapproval which results from conformity to, or defiance of, authority and is very quick to feel whether there is love as well as law back of the authority. A child who never disobeys because his will is never crossed has not yet begun to learn the lesson of self control. A weak willed child cannot be obedient in the higher sense of the word, because his outward conformity to rule is due not to self control but control by another. The strong willed children, with whom, perhaps, in early years there are the sharpest conflicts, are those who under the proper training become most self controlled and are reported as the most obedient.

It will be noted that many of the returns lay especial emphasis on the need that training in obedience should begin during the first weeks of life in the formation of regular habits of eating, sleeping, etc. Children whose training is begun thus early seem to acquire a feeling for law and authority which makes the conscious conflict of will which must inevitably come to every normal child when it finds its instinctive desires interfered with by the will of another, less difficult for the child as well as for the parent. Sully (13) considers that the best children, from a biological point of view, have most of the rebel in them and that the passionate fits of anger and rebellion in vigorous children are perfectly normal in the earliest years of life, yet quite as fundamental in the child is a certain instinctive respect for rule or custom and many of the outbreaks are a protest against a disregard of this feeling. If a child is allowed to have or do a thing on one day and refused it the next, this instinct of order is violated and a sense of injustice roused in the child. That such outbursts are of less frequent occurrence and duration in children whose training in self control is begun in the cradle, is evidenced by many of the cases reported in detail.

The conclusions drawn from the observation material are greatly reinforced by the reminiscent papers giving the mature estimate on the value of training in obedience received. There were 366 answers to this question. These answers represent a very great diversity of training but there is a remarkable uniformity in the estimates of value set upon early training in obedience. Those who have had little or no training feel that it has been a loss and injustice, and that self control and the

necessity of yielding obedience to law and order in organized society has been learned later at a needless cost of suffering. On the other hand those who have been brought up under rigid and strict system of discipline usually feel that less law and more understanding of child nature would not only have conduced to a happier childhood but have been far better for the development of character. Many adults retain a lingering sense of injustice, and state that their childhood was embittered by lack of sympathetic understanding and forced outward obedience. Yet apparently even worse in its effects is that lack of system which over indulges the child, at times, and, when disagreeable consequences result, punishes with severity the faults due to previous laxity and indulgence. Of the training which, though kind and sympathetic, is at the same time invariably firm in insisting upon a few fundamental principles, there is most grateful recognition. Even in disobedient children there is often a craving for law and order that is sometimes recognized by the child, as the following reminiscence illustrates :

F., Adult. I cannot imagine a child whose home training contrasted more strongly with its life at school than my own did. In the latter was order, good discipline and evenness of rule. To this training I know that I responded by a willing obedience, an obedience in which I was conscious of delight. At home, was disorder and chronic disobedience through utter inability to elicit, far less maintain, obedience. My father was easy going and desired peace at any price. My mother was strongly emotional, especially in a religious way, a creature of moods, changeable as the wind. The more I grew to understand her the more I disobeyed her and had my own way. I know that I was often willfully and defiantly disobedient but know, too, that the obedience expected was as a rule both unreasonable and uneven. Yet, I remember that, as a child, I hated *to be able* to disobey, and believe that I should have been happier in a well regulated, orderly home, and for being kept in my place as a *child* rather than allowed the freedom of an adult.

I value very highly the effect which the training in obedience received at school had on my own character. If I was unhappy in the discordant sense of chaos and lawlessness at home, it but served to accentuate the harmony felt in the order and good government at school, I can quite conceive that an utter lack of training in obedience might have proved a terrible obstacle to a future belief in the real though unseen harmony throughout the universe.

It is of interest to note that one of the most extreme cases of chronic contrary mindedness is reported from this same family, where there were several children, and that under different influences, improvement has occurred even in adult life. Other expressions in regard to the value of training in obedience on character are :

M., 20. I think that my training in obedience led me to self control. It in no way cramped my will or individuality. I was trained quite strictly, but no unreasonable (as I now think) demands were made upon me.

F., 22. Was so strictly trained that her mother's approval or disapproval became law to her rather than the idea of right and wrong. Thinks it made a moral coward of her.

F., 22. I was trained rather strictly but kindly, and am glad of it because it gave me self control and a willingness to submit to demands since made upon me which I should not otherwise have had.

F., 25. Was too much indulged, which has made it very hard for me since I have been away from home.

F., 27. I have an abiding faith in the value of training in obedience. It seems to me that such training inculcates the rudiments of obedience to a higher law.

F., 22. I was not at all strictly trained and I am afraid that my lack of training has to answer for the fact that I find it very hard to yield my own opinions or wishes.

Factors which were mentioned as incident to bad training were threatening a child with punishment without fulfillment, uneveness of requirements, indulgence alternating with laxity, allowing a child to disobey because the conflict is too troublesome or inconvenient at the time, indulging a child's caprices when young and then trying to enforce obedience later, too great severity, neglect, except in cases of annoyance or expediency, lack of self control on the part of the one in authority, unreasonable demands, relegating punishment to another person and the use of fear as a motive of obedience.

From the point of view of psychology, training in obedience is will training, and its success must be measured by the degree in which it develops moral self control. Mere outward conformity to rule through fear or compulsion is very likely to induce either obstinate rebellion or deceit in accordance with the disposition of the child. The most obedient children are usually characterized as strong willed and courageous. Mr. Bohannon (3), in his study of Peculiar and Exceptional Children, found that exceptional obedience was often associated with timidity and weakness, but he also found that exceptionally courageous children were frequently characterized as obedient. In the former case, however, the obedience was compliance to the will of another based on physical weakness and timidity, and in the latter, obedience in the higher sense of the word.

In turning to the treatment of obstinacy two aspects of the question present themselves: what general course of training is adapted to avoid or overcome obstinacy, and what is the best treatment for a child during the occurrence of a fit of obstinacy. The answer to the first question, in so far as the present study can give it, is found in the discussion of obedience. If obstinacy is considered as an inhibition due to the weakness of an untrained will, then any form of training which leads to the development of self control and strengthening of will, will tend toward the overcoming of obstinacy.

In the treatment of a child during a fit of *sullen* obstinacy,

experience seems to have taught almost universally that corporal punishment is not only useless but positively harmful. A child can be cowed into sullen submission by superior force but *in not one case* from England, Poland or America, the three countries from which material was gathered, is it reported that such a course of treatment has benefited the child or helped him toward self control in the slightest degree, while numerous cases are reported in which the obstinate disposition has increased "in spite of the most extreme measures." This is especially emphasized in the reports from English schools where corporal punishment is the rule and for most offenses is regarded quite as a matter of course. The treatment which has proved most effectual in by far the larger number of cases, is leaving the child entirely alone until there are signs of relaxation. A child in a fit of obstinacy is not in a condition to be reasoned with, brute force apparently tends to increase rather than decrease the cramp of will and usually arouses anger, if it is not already present, but if the child is left entirely to himself the nerve tension tends to decrease and the physical condition to return to the normal. The loneliness which every rebellious child feels, however hardened he may appear, and the sense of being cut off from approbation and companionship, is increased either by being left alone or ignored in a room where others are present, and he becomes far more ready to respond to sympathy and reason. A child in a genuine fit of obstinacy, *i. e.*, in which the child stands out against what he ordinarily recognizes as authority, must be regarded for the time being as in a morbid condition and the problem is not merely to overcome this condition but to accomplish this in a way that will lessen the probability of its recurrence. Though obstinacy has been considered as a weakness of will, it often occurs in otherwise strong willed children, but for the time being the will is not free to act in a particular direction and until self control is re-established the child is unable to cope with the situation. In many cases the obstinate child reaches a point where he wishes to give in and cannot. His will is not sufficiently well trained or strong enough to break through the barriers which inhibit its action. His spirit may be cowed and he may be forced into outward compliance by severity, but he does not thereby advance a step toward self mastery. Probably no severer punishment can be inflicted upon a sensitive child than the feeling of being absolutely ignored and shut out from sympathy and companionship, and even the most hardened little offenders yield to its influence, after a time, even though there may be a show of bravado. Teachers from the London Board Schools, where the children come from the most unfavorable home surroundings, report

that this is the *only* method of dealing with obstinate children which meets with success. Sometimes the child is placed in a room by himself, sometimes simply excluded from participation in all school work or play until the thing required is done. There are, of course, great individual differences. With some children a sympathetic word at the right time may break the spell while others must fight the whole battle by themselves though they are probably helped by a consciousness of sympathy. Concrete cases here furnish the best illustration. Some have already been given in the descriptions of typical cases of obstinacy which include treatment as well.

F., 5. Is subject to fits of obstinacy, when she refuses to anything asked of her. Completely ignoring her is the best treatment and she is usually penitent in an hour or two.

M., 3. Has occasional spells of being sulky and obstinate. Absolutely ignoring him generally works a cure.

F., 4. Very obstinate and willful at times. Sometimes had to be left alone for an hour or two before she was penitent. (In Baby Room). A bright child who, if not chosen when special things were required, would refuse to do anything more that morning. Would sit in her seat and refuse to move or speak. If made to move would cry and scream and continue it through the whole session. Talking, coaxing, and the cane had no effect. The only successful treatment was to take absolutely no notice of her. She would then be all right by afternoon and acknowledge her naughtiness.

F., 9. Had fits of sulking and obstinacy whenever refused anything she wished to do or obliged to do what she disliked. Leaving her unnoticed proved the successful treatment and she has outgrown them.

M., 13. Refused to go to church because irritated by a reproof from his father at the breakfast table. Paid no attention to his mother's instructions to get ready. When his father commanded him to get ready said he would n't go. His father thrashed him until he dared go no further but the boy would not yield and told his father that he might kill him but he would n't go. The father broke down and told him he might do as he pleased. The boy melted instantly and promised to do as he was told.

F., 14. Refused to apologize for rudeness in school. Had her desk set apart from the others and was otherwise ignored. This went on for several days until she could stand it no longer and apologized.

The letting alone treatment, which has been found by experiment to be the most successful in the treatment of obstinacy, seems to be founded upon principles which are sound both from a psychological and physiological point of view. Physiologically the system is in a condition of nervous and muscular strain and correspondingly the mental state is one of resistance which active opposition tends to increase. With nothing to resist, both physical and mental strain are gradually relieved and conditions become normal.

To this general rule of treatment there is apparently one exception. Obstinacy is so frequently accompanied by anger, in at least some of its stages, that it must be taken into account in discussing the state as a whole, though there are forms of

obstinacy in which there is no element of anger. The character of the anger depends upon the temperament of the child and may be sullen and persistent or violent and explosive. It is in cases of the latter class that a different mode of treatment seems sometimes expedient. A number of cases were reported in which obstinacy was accompanied by a violent outburst of anger, which, unless checked, was of a prolonged character leaving the child in a state of exhaustion. In these cases corporal punishment, either in the form of spanking or a shock of some kind, seems to have been not only immediately effective, but to have proved as great a relief to the child as to the parent or guardian. In these cases there is evidently a high degree of nervous tension and the condition is a very near approach to hysteria. Physical pain or shock relieves this tension and drains off the nervous energy in another direction and, from a hygienic point of view, seems the best treatment for this class of cases, which a few examples will suffice to illustrate.

F., 5. Refused to take her place in line for marching because another child had the place that she wanted. When told that she must either take the place given her or remain in her seat, she screamed, kicked and held her breath. On being removed from the room she threw herself on the floor and continued to scream in spite of coaxing and threats of punishment. Was finally given several sharp blows with a rattan. Instantly stopped screaming and sat up with a bewildered look. On being spoken to kindly by the head mistress was responsive and after a few minutes said she was sorry and would be a good girl.

M., 6. On being refused permission to do something he wished, became very angry and refused to be diverted in any way. Threw himself on the floor and refused to get up, kicked and screamed if touched. This continued for an hour when his aunt came in. She put him in a chair and tried to reason with him but he began to scream again. She picked up a glass of water and threw the contents directly in his face. He stopped screaming at once and gasped "do it again."

In reviewing the results of the present study the following points are to be noted:

As a psychological state obstinacy is a very complex phenomenon, involving elements of heredity, physical conditions, and effects due to immediate and remote environment. It may be highly emotional and accompanied by anger and other depressive emotions or there may be a predominance of intellectual factors and a comparatively low plane of emotion. In its positive form it is manifested by persistency in a certain course of action; in its negative form, it is a persistent refusal to act in certain directions.

Its physical symptoms are chiefly those of the accompanying emotions and vary in accordance with these. The one symptom invariably present in all cases appears to be a deficiency of muscular control, either in the form of cramp or temporary paralysis.

Many cases of obstinacy have a physical basis and require physical quite as much as moral treatment. Malnutrition, any form of stomach or liver trouble, eye strain, anæmia, and over fatigue are all potent factors in the production of contrariness and obstinacy.

Hereditary predisposition was stated in about one-fourth of the cases and a family history of various forms of neurosis given in many others.

The obstinacy of old age is due largely to fixity of mental and bodily habits and is increased by the sensitiveness due to a sense of failing powers. Animal balkiness is found to have its psychic roots in the thwarting of instinctive desires, physical conditions, over fatigue of the nerve centres and to be affected by many of the factors which occur in human obstinacy. Pathological cases which are clearly due to a deficiency in voluntary control, appear to be simply exaggerations of ordinary manifestations and strengthen the view that obstinacy is due to a weakness of will. This view is also strengthened by the large proportion of reminiscent cases in which the subjects say that they have really wished to yield but could not.

Training in obedience may be regarded as will training, and as such, tends to counteract obstinacy. For the highest development of voluntary control a certain amount of freedom is necessary. Too many rules and restrictions tend to produce either rebellion and obstinacy or to cause an arrest of volitional development.

The method of leaving alone or ignoring a child during an attack of obstinacy, which experience has shown to be the most successful treatment, is in harmony with both physiological and psychological principles, since it is the course best adapted to diminish the mental and physical tension which are characteristic of obstinacy. The apparent exception to this rule of treatment can be explained by the different physiological conditions, and the need of study in connection with the individual case is shown to be a necessity for intelligent and remedial treatment.

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PREPARING MANUSCRIPT FOR THE PRESS.

By Louis N. Wilson, Librarian, Clark University.

In preparing matter for the printer, whether it be a circular, a magazine article or a book, some one has said that the same care should be exercised as would be taken if the matter were to be used in manuscript form. While this may be looked upon as extreme, and, in our busy, hustling life, impracticable, there is enough truth in it to warrant careful consideration. Manuscripts are undoubtedly better prepared to-day than ever before, yet there is still room for vast improvement. The modern printing office, too, requires better copy, as, with the shorter working day and the higher wages paid, the cost of composition increases year by year.

Copy, then, should not be sent to the printer until it is, as nearly as possible, perfect and complete. It should be written on paper of uniform size (8x11 inches is a good size), on one side of the paper only, and each sheet containing about the same amount of matter, as this enables the printer to distribute the copy among several compositors and allows him to make a fairly accurate estimate of the length of the article. Pins should never be used to fasten sheets together, but the pages should be numbered consecutively throughout. Inserted pages should be numbered alphabetically—as 4a; 4b; 4c; etc. If any pages are removed the sheets should be renumbered, or those removed accounted for on the preceding pages. The pages of individual chapters should not be numbered independently. Use black ink.

If the copy can be typewritten it is much better for both author and printer as it saves time and money in the composing room. The author should, however, look over the copy carefully to examine capitalization, punctuation, etc., as the typewriter may introduce errors which can be corrected without cost before the manuscript is set up. If the copy is written, the writing should be legible, and no abbreviations used unless they are to appear in the printed form. Proper names, technical terms, and foreign words and phrases should be written with the utmost care, as they are meaningless to the compositor and the context affords no help whatever. Do not finish a word with a hasty scrawl, as the compositor cannot spend his time puzzling out an author's meaning; and avoid interlineations in a cramped hand.

Verify all references before sending the manuscript to the printer, and do not put it off to be done in proof. Be careful about punctuation. It seems but a small matter to add a comma or to change a period to a semicolon in the proof, but this all takes extra time which the author pays for, and in making even minor changes there is always danger of the compositor dropping out a letter or making other errors. Indicate your own paragraphs. Preserve uniformity in spelling, capitalization and punctuation. A word that may or may not be written with a capital letter should not be written one way in one part of the work and the other way in another part. Adopt one form of spelling and adhere to it throughout. Leave a margin of about two inches on the left side of the manuscript and an inch at the top; if you have any instructions for the printer write them in this margin—preferably in colored ink or pencil.

The two sizes of type most commonly used are employed in this article, the larger is known as ten point, the smaller size as eight point. The larger part of the article is set in ten point solid, the matter on pp. 67, 68 is set in ten point leaded. The size of type is exactly the same, but on pp. 67, 68 a lead has been inserted between the lines. The upper half of page 64 is set in eight point solid while the last paragraph on page 65 and the major part of page 66 is set in the same type leaded. When a change in type is desired it should be indicated on the margin of the manuscript. Be careful to indicate where the change in type begins and where it ends.

Foot notes should be written at the bottom of the page to which they belong, and, if more than one on a page, should be numbered consecutively. They should be separated from the body of the page by a horizontal line drawn entirely across the paper and the words "Foot Note" written opposite the matter in the margin.

In marking division headings use

1. CAPITALS FOR MAIN HEADINGS.
2. Capitals and Small Capitals for Sub-Headings.
3. small capitals for divisions under no. 2.
4. *Italics for side heads.*

All words or letters to be printed in CAPITALS in the body of the text should be underlined three times; small capitals, twice; *italics*, once. If, in looking over the manuscript, it is desired to change a capital to a small letter, draw a line obliquely through the letter to be changed and write l.c., which means "lower case," in the margin opposite. If it is desired to change a small letter to a capital, underline the letter three times.

In dealing with figures follow some definite rule. Some

writers make it a rule to use figures for 101 and over, while for all numbers from one to one hundred, words are used. This must, however, be regulated by the character of the article, but the author should be consistent and not use on one page, for instance, the figures 76 and on another the words seventy-six.

If diagrams or illustrations are used they should be drawn or pasted on separate sheets. Each sheet should be lettered as A, B, C, etc., and at the point in the manuscript where the illustrative matter is to appear write Diagram A, or Plate B, enclosing the words with a line, thus:

DIAGRAM A.

Extracts and quotations should be carefully marked, and, if of more than two or three lines, should be marked to be set in smaller type than that of the body of the work.

Professors E. C. Sanford, of Clark, and E. B. Titchener, of Cornell, made a strong plea for summaries and indexes in scientific articles in the *Am. Journal of Psychology* for Jan., 1903, Vol. XIV, pp. 84-87. The preparation of an index will be mentioned later, but it might be well here to call attention to the value of a bibliography. It is almost criminal in these days to publish a book without a good index, and in some classes of books and articles, a bibliography is almost as important. The common practice among authors is to make references to literature consulted by using foot notes. Now the foot note is not only unsightly, but it is very expensive if used to any extent. The printer's rule is to charge up a page of composition according to the type used to any extent on the page. The price of a page of composition of this size in ten point type, solid, is about $1.20 per page, while the price of a page set in eight point solid, is about $1.80. If there are several foot notes on a page the cost of their composition is computed at the rate of the eight point type in which the foot notes are set. Thus by printing references in the form of a bibliography at the end of the book or the article the author effects quite a saving in the price of composition.

In order to make the bibliography as complete as possible, and with the least amount of labor, it is a good plan to make out slips or cards of all books and articles consulted in the preparation of the manuscript, carefully noting special chapters or passages and adding such notes as would be useful in annotating. These slips should be made out carefully, as the author reads up on any subject, and should contain: name of author in full; title of article or book; if a magazine article, the name of the magazine or publication in which it appears, with place

of publication, date, volume, and both the page on which the article begins and the one on which it ends; if a book, the name of publisher and place of publication, date of issue, and total number of pages. (See *Publications of the Clark University Library*, Jan. and July, 1904.) Good examples of annotated bibliographies are those of Professor W. G. Chambers, in the *Pedagogical Seminary* for March, 1903, Vol. X, pp. 140-143, and Professor A. F. Chamberlain's "Notes on Periodical Literature," in the issues of the *American Anthropologist*. At first blush this making out cards during a course of reading seems a great waste of time, but those who once adopt the plan adhere to it and find that, in the long run, they acquire a large amount of valuable material and save time. When this plan is followed and the manuscript written, the author has only to select from his list of cards such titles as are to be printed, arrange them alphabetically by authors, number them consecutively and add the numbers at the proper places in the manuscript. If these points are borne in mind when work is begun on the manuscript it will save a great deal of time and much annoyance later. For examples of this method see Professor W. H. Burnham's "Outlines of School Hygiene" in the *Pedagogical Seminary* for June, 1892, Vol. II, pp. 9-71—although, unfortunately in this case, the titles in the bibliography were not arranged in alphabetical order by authors—and Professor A. F. Chamberlain's book "The Child. A study in the Evolution of Man," Chas. Scribner's Sons, N. Y., 1900, pp. 498. In the first named there are only two short foot notes, and in the latter very few.

Before submitting manuscript for publication it should be rigidly and critically examined and cut down to the shortest possible point consistent with clearness and a proper elucidation of the subject. Many a good manuscript has been rejected on account of its inordinate length, and one sometimes wishes more that are printed had shared a like fate. In these days of much printing, the wise author will confine himself to a simple straightforward statement of his subject and keep his manuscript within reasonable limits, if he would secure an editor's or publisher's favorable consideration. An author frequently says he cannot possibly reduce the length of his article by a single sentence; but even in such cases they have often been reduced a third or even a half and improved thereby. (See Dr. Sanford's note on this subject, *Am. Jour. of Psychology*, Jan., 1903, Vol. XIV, pp. 86-87.)

As an author prepares his manuscript he should have clearly in mind the style and form it will assume when in print. He should indicate clearly, headings, paragraphs, sections, etc., etc. It is too commonly assumed that this is all done in the

printing office, but it is a very bad thing indeed to edit matter in the composing room and, when this is done, the author certainly pays for it. In many cases it is only necessary for the author to explain to the printer just how his article is to be set, but, here again, one is confronted by the increased cost and the increased liability of errors. The man to whom the explanations are made is not as a rule the one who sets the type, so that he must go over the article carefully and mark it for the compositor, or give the author's instructions to the foreman of the composing room, who in turn must instruct each man as he gives out the copy, often a few sheets at a time.

The rule of the printing office is that compositors shall follow copy. And this is absolutely necessary because, in most cases, several men may be at work upon the same manuscript and if each man were allowed to exercise judgment as to paragraphs, punctuation, capitalization, use of the hyphen, etc., the author would be the first to complain of the result. Each printing house follows some definite rule in such matters. Thus some journal editors change the word through to thru; programme to program; catalogue to catalog, and so on—disregarding the author's preferences because they have adopted the reformed spelling and their compositors are so instructed. English printing houses often change such words as honor to honour; parlor to parlour; criticize to criticise, and so on, because the English compositor has been trained in that way.

Mr. Horace Hart, Printer to the University of Oxford, prefaces his Rules for Compositors and Readers at the University Press, Oxford (16th ed., London, 1904, 47 pp.), by the statement: "The following Rules apply generally; but directions to the contrary may be given in cases of works to be printed for other publishing houses which have also adopted a style of their own."

In special work, where particular modes of spelling are essential, it is well to adopt the custom of some authors who send with their manuscript a slip stating that "This copy has been carefully prepared by the author and the printer must make no changes without the author's consent."

Proof.

The first proof taken after the matter is in type is the "office proof" which is corrected by the printer's proof reader who looks it over carefully while another person reads the manuscript to him. He marks any error made by the compositor and notes for correction any palpable error made by the author. He is supposed at this stage to give careful attention to the spelling, the punctuation, the grammatical construction, the style, and, sometimes, even looks up quotations, references and foreign phrases. Proof readers in large book printing shops

often become very expert and will frequently call the author's attention to inaccuracies that had escaped his attention. The "office proof" having been properly marked is returned to be corrected by the compositor who set it up. When this is done another proof, called "author's first proof," is taken. The printer's proof reader compares this with the office proof to see that all the corrections he had indicated have been made and then the author's proof and the manuscript are sent to the author for his examination.

At this point it must be borne in mind that all corrections now made are made at the author's expense. Printers charge from 60 to 80 cts. an hour for corrections in proof, and while the crossing out of a word or a sentence here and there, the changing of punctuation or paragraphs, changing ordinary type to capitals or italics, etc., may seem a very slight matter to the author it often entails considerable expense.

In some cases, where, for instance, words are inserted or taken out, it may be necessary to "overrun" several lines, for you cannot insert or remove matter from a line of type without taking either space or words from the lines immediately above or below the one affected. It is at this point that an author realizes the value of time spent in the preparation of his manuscript. Time saved by hurried work or by failure carefully to revise in writing is doubly lost in proof corrections. Publishers are careful to warn writers on this point as will be seen later, on p. 66.

In correcting proof, therefore, the author should confine himself strictly to essentials. Many writers say they cannot correct an article in manuscript and prefer to do it in proof form; and there is much force in the statement that an article looks altogether different when set up in type. Some people seem to play with their proof and get into the habit of making changes which, from the printer's point of view, seem quite uncalled for. An example of this is where an author had written: "On the following day, after breakfast, I began to feel the effect of the drug." When he saw the proof he changed the sentence to read: "After breakfast, on the day following, I began to feel the effect of the drug." In making the correction the type had to be lifted out to make the change and the f in "feel" dropped out and by an error on the compositor's part a letter p was substituted for the missing f. The author saw page proof and noted no error, but the scientific value of his article was destroyed by the sentence, "After breakfast, on the day following, I began to peel the effect of the drug"—all of which goes to show that only absolutely necessary changes should be made and that proof should be read both in galley and page form with equal care. Proof corrections should be made on the galley proof margins, preferably in ink. If a

colored ink is used the time of the compositor will be saved as he can see more clearly the changes to be made. Long lines connecting the error with the correction in the margin should be avoided as much as possible and when necessary they should be made with great care.

When there are several errors in one word it is better to rewrite the whole word correctly than to indicate each change separately. If several lines of new matter must be inserted, it should be written on another piece of paper and attached to the margin of the proof sheet.

Common errors to be looked for in proof reading are the omission of a letter or syllable, or the substitution of one letter for another, which does not greatly change the outline of the word; as, instution for institution, solidifid for solidified, mouuting for mounting, petion for petition; the insertion of a word which is not in the copy and which does not materially alter the sense—this is especially true of articles and conjunctions; the repetition of a syllable or word which ends one line, at the beginning of the next; the substitution of one letter for another, which sometimes makes sense—as in the case just cited, peel for feel.

When the printer's proof reader is in doubt about the author's meaning he writes in the margin opposite the doubtful line an interrogation point or the letters qu., or qy. Such a query should be examined by the author and, if there is good reason, the passage or word changed; if he desires it to stand he simply draws a line through the proof reader's query.

Authors should see a page proof of their matter. This should be given a careful, final reading. If changes are expensive in galley proof they are doubly so in page proof, as here the introduction or elimination of a word or two often necessitates the "overrunning" or readjustment of several pages. In magazine work the printer will often avoid this overrunning by making the page a line or two longer or shorter, but this should not be encouraged as it certainly detracts from the general appearance of the journal, and a good printer does not like to do it although he is often compelled to.

Type Setting Machines.

The first machine for setting type was invented by an American residing in England, about 1822. He was granted an English patent, but his machine seems never to have advanced beyond the model stage. The first patent granted in the United States was in 1840. Between 1822 and 1890 about fifteen different machines were brought out for setting type. The most practical of these is the Mergenthaler, or Linotype. This machine, operated like a typewriter, casts the letters properly

spaced, or "justified," in solid bars the length of the line. The longest line thus far attempted is five inches. The line when cast passes between knives to be cut to the exact size and is then placed on the galley to be made up into a form. If a correction is desired the line must be thrown out and a new one made. After the type thus cast has been used it is thrown into the melting pot to be cast over again. The linotype machine is in use in about 1,500 offices in this country, including both large and small newspapers, and many book houses, such as Harper & Brothers, and D. Appleton & Co. It is also used by most of the leading newspapers of Great Britain, Germany and France. In the Boston Public Library and in the Library of Congress at Washington it is used for printing catalogue cards. By changing the matrices—the moulds for casting the letters—they are able to print cards in over twenty different languages. The machine reduces the cost of composition in straight matter as one machine does as much work in a given time as four or five hand compositors. It makes a great saving in type, but is very liable to get out of order and is most successful where a number of machines can be used and a machinist kept to make necessary repairs.

Within the past few years a new machine has been placed on the market, known as the Monotype machine. This latter casts each letter separately, which is a decided advantage as it allows greater freedom in corrections. It casts and composes in justified lines by a single automatic operation, which is controlled by a perforated paper ribbon, the product of the manual operation of a keyboard. This machine is preferred for book work, because it permits the correction of errors without discarding the whole line, or, as in some cases, several lines. Indeed type set by it can be corrected as readily as type set by hand. The linotype seems to be preferred in newspaper work.

Each of these machines furnished with capitals and small letters for two sizes of type costs about $3,500. Varieties of type and other accessories usually add about $1,000 more. These machines have many limitations and the general opinion seems to be that the work is inferior to hand work. The saving by machine work is not confined to the increase in amount of work done, but covers a large saving in type. In a book and job office where no machines are used the cost of equipment in type is estimated at $1,000, a man and the depreciation of the stock at 10%, so that a printer employing ten men would make an initial outlay of $10,000 for type and must expend $1,000 annually for renewal. Mr. Theodore L. De Vinne, considered by many as the foremost printer in America, is said to place the figures in his plant about 25% higher than those I have just given. The life of the ordinary type varies of

course—as in the case of long runs of 100,000 copies or more, when the type is rendered worthless, to special type seldom used and never renewed.

Agreements with Publishers.

A very few magazines pay authors for scientific articles. Some editors pay a given sum for an article upon receipt of the manuscript and reserve to themselves the right to publish at their convenience, or not to publish it, holding that what they have paid for is their own to do with as they see fit. Unfortunately, however, the author is too often unaware of this and awaits anxiously from month to month, or quarter to quarter, the appearance of his article. Many an author regrets taking money for an article when he finds that the manuscript is entirely beyond his control; that it may be issued years later, when out of date, and reflect but little credit on him; it may never appear at all; or, it may pass into other hands as an asset of the journal to which he sold it. If the author understands this to be the case, no injustice is done, but in most cases it is not so stated at the time the manuscript is accepted and paid for by the editor or publisher. Some journals, while they pay nothing to the contributor, furnish fifty or a hundred reprints to the author; but this custom does not prevail to any extent.

In publishing a book it is customary to have a contract drawn up and signed by both author and publisher, stating very definitely the terms upon which it is to be printed and published. There are a great many forms of contract and each may contain one or more special clauses governing the particular book involved. Probably no stereotyped form of contract could be devised that would give satisfaction either to the author or to the publisher. There are, however, certain clauses common to all these contract forms which may be of interest here. They are:

1. The author of the work named agrees that the publisher shall take out copyright in his own name, shall have the exclusive right to print and publish the work during the full term of the copyright, and during the full term or terms of any and all renewals of the same; that the author will not, without the written consent of the publisher, write, print, or publish any other edition of the work, or any work of a similar character likely to interfere with or injure the sales of the said work during the continuance of this agreement.

2. The author agrees that he is the legal author and copyright proprietor of the work and that it is in no way a violation of any copyright belonging to any other party. He authorizes the publisher to defend at law any suit for infringement of copyright, or for libelous matter alleged to be contained in the work, and agrees to pay to the publisher such reasonable costs as he may incur in defending such suit and any damages he may be obliged to pay as a result of such suit.

3. The publisher agrees to print and bind the book in such manner as he deems expedient and as shall be satisfactory to the author; agrees to properly advertise the same and to keep the market supplied so long as a reasonable demand for the book exists.

4. The publisher agrees to pay the author a certain percentage on all books sold—it may be ten, fifteen or twenty per cent. of the trade, or the retail price—to make on specified dates semi-annual returns of sales, and semi-annual settlements for the same. No royalty to be paid on copies destroyed by fire or water, nor on copies given away for the purpose of aiding the sale of the work.

5. The author agrees to furnish the complete copy for the work ready for the compositors; to read the proof and furnish copy for the illustrations, if any, and to furnish the index prepared from the page proof. The publisher agrees to pay cost of all alterations or additions in proofs or plates made by the author during the preparation of the work for the press, providing such changes do not exceed ten, fifteen, or twenty per cent., as the case may be, of the total cost of composition and the preparation of the plates. If the cost of such changes exceeds the percentage agreed upon, the excess is to be paid by the author.

6. If, on the expiration of a certain time after date of publication, or at any time thereafter, the publisher decides the work is unprofitable the author agrees, upon written notice from the publisher to that effect, to take from the latter, at cost, the plates and unsold copies; or failing to do so gives the publisher the right to melt up the plates and dispose of the copies on hand as he may see fit, free of any percentage or royalty, and to cancel the contract.

7. Each party to the agreement may assign his interest in the same, but only as a whole, and no part of such interest shall be assigned by either party.

There are, as already stated, many variations from the above, and in this connection it might be well to point out some clauses that should be carefully examined by the author.

It will be noticed that under clause 1 the author agrees not to write, print or publish any other edition of the work or any work of such a character as to be likely to interfere with or injure the sales of the work in question without the written consent of the publisher. Unfortunately, however, there are publishers who grant serial rights in books to newspapers without the permission of the authors. This practice, while more common than is generally supposed, is condemned by the best publishers. Those who resort to it defend it on the ground that it advertises the book and they receive no money compensation from the newspapers. It is extremely doubtful if such serial newspaper publication does help the sale of the book, and the publisher who does not receive cash from the newspaper receives in most cases, its equivalent in advertising space. It is not for the author's best interest and he should see that his contract forbids it. In common justice the publisher should agree not to give or sell serial rights to newspapers or magazines without the author's written consent.

Another practice which is obtaining greatly in these days of

keen competition is a right, which some publishers claim, to sell cheap editions, at a price suitable to themselves, without consultation with the author, and often without payment of adequate royalty.

The author may take out copyright in his own name if he prefers to do so.

Under clause 2 provision is often made for prosecuting, by the publisher, any infringement of the copyright. In such cases the author and publisher usually share the expense of such prosecution and divide equally any damages awarded by the court. But the author may reserve the right to prosecute at his own expense and retain any damages awarded.

Under clause 4 probably the greatest variations occur, as the terms an author may make with his publisher depend very largely upon the author's standing as a writer, or as an authority in some special field, and upon the character of the work itself. Some works, by their very nature, can never attain a large circulation and in such cases the publisher may insist upon the author guaranteeing the cost of the composition and the plates. If the work proves a success author and publisher share alike in the profits after the cost of production has been met. In many cases the publisher, while granting the author a certain percentage on all copies sold, defers the first payment until after the cost of publication has been defrayed, or until one thousand copies have been sold. In some cases the royalty may be arranged upon a sliding scale, as 5% on the first thousand, 10% on sales between one thousand and five thousand, and 15% on all sales above five thousand.

Under clause 5 the publisher will, in some cases, allow a certain fixed sum for making an index, but this properly belongs to the author. The matter of alterations in proof has been treated earlier in this paper. That it is often a sore point between author and publisher is unfortunately too true. Some publishers attach to their contracts a special clause relating to changes in proof, somewhat as follows:

"Let it be urged that the manuscript be delivered in final and complete form just as the author wishes it printed. To correct manuscript requires merely the stroke of a pen; while to correct type is laborious and expensive. The cost of author's corrections in the proofs could be avoided entirely if the original manuscript were made absolutely correct. It should be gone over with great care before it is forwarded to the publishers. Especially should typewriters' errors as to punctuation and the use of capitals be corrected. The type-setter works "by the piece;" his wages depend upon the amount of work he can perform, and this amount depends directly upon the legibility and systematic arrangement of the manuscript."

"Permit us to invite your particular attention to the . . . section of the contract. The publishers' presumption must be, as stated in the contract, that when a manuscript is sent in to be printed, the author's work has been done. The cost of departures from the manuscript in proof should not therefore fall upon them. It belongs to the author's part, the preparation of the text. We are glad, however, to allow ten per cent. of the cost of the plates for such changes, a margin usually more than sufficient. While we regret extremely that occasionally an author's bill for these changes in excess of the ten per cent. is more than he anticipated, we feel compelled to hold that it is part of the cost of writing the book, for which his copyright returns are expected to reimburse him, just as the cost of manufacturing the book in first-rate style and adequately "pushing" it belongs to the publisher. Without such a limit of our liability, we could not safely accept manuscripts, and in some cases could not afford to publish them. From the nature of the case, changes of this sort can only be charged for by the hour. We can only say that we insist most rigidly that authors shall not by any accident be overcharged."

"It is understood and agreed that a percentage of the full cost of the plates shall be allowed the author for changes made by him in type or in plates during the process of making the plates or afterwards, and that the cost of author's changes *in excess of this amount shall be charged to the author*. The cost of correcting the errors of compositors will not in any case be charged to the author, but he will find that the cost of his own changes will accumulate more rapidly than he would anticipate, unless he has had great experience. It will be advisable for him to make his manuscript as nearly perfect as possible."

In all that has been said about alterations in proof the matter has been considered from the standpoint of the publisher and with a view to avoiding expense to the author. Publishers, however, do not object to changes if the author is willing to pay the excess. They realize that a later experiment, or a recently published result, may necessitate large alterations in proof, and that a fine literary production is often improved—like any work of art—by the hand of the master. If a change in proof will be an advantage it should by all means be made, but it must be made at the author's expense.

ELEMENTARY EDUCATION IN ENGLAND.

By Anna J. McKeag, Wellesley College.

Two years ago, Dr. Sadler, then Director of Inquiries and Reports, said to an American audience, "Every nation is controlled in part by its own past and cannot change its methods of education as if they were merely mechanical devices of photogravure or electric traction. Any ideal of education which is alive has its roots deep in history and possesses profound psychological significance. It is not a thing to be lightly tampered with or recklessly destroyed."

Without a proper recognition of this traditional and historical element it is not possible to appreciate and interpret the attitude of the two parties in the present educational controversy in England. English education has had, to use Sadler's words, "a contorted, painful growth." Lord Roseberry once characterized it as "a chaos of almost haphazard arrangement." It is like a great house composed of irregular and inharmonious additions to a primitive hut. The succession of parliamentary enactments, including even the Act of 1902, are to be regarded as repair-work; for England is still unwilling to tear down the ancestral hut.

Of these historical and traditional elements three at least demand consideration in any exposition of the present situation: (1) the origin of the Voluntary Schools; (2) the traditional attitude of the government in regard to the management and support of schools; (3) the provisions of the Act of 1870 which are annulled or modified by the Act of 1902.

The Voluntary Schools, which are the chief bone of contention in the present controversy, had their beginning nearly a century ago. It is a singular fact that neither of the two men to whom their inception is due had any marked originality or breadth of view in education, both of them being decidedly mediocre in natural gifts and intellectual attainments. "Both," says Sir Joshua Fitch, "saw one particular phase of education in false perspective." And yet the history of elementary education in England in the early part of the nineteenth century is practically the history of the two educational organizations founded by Joseph Lancaster and Andrew Bell.

Lancaster was a warm-hearted, impulsive, philanthropic, improvident young fellow who, thwarted in his project of run-

ning away from home to go as a missionary to the Jamaica negroes, turned his altruistic zeal in another direction and opened in his father's poor little house the Borough Road School, free to any children who could not afford to pay fees. It was impossible for one man to teach, by any of the methods then in vogue, the thousand children who flocked to the school, and Lancaster hit upon the expedient of selecting a number of older boys to teach the younger the lessons they themselves had already learned. Thus arose, from the necessity for economy, the Monitorial System, afterwards much lauded as a great educational discovery. Everything was reduced to system. The school itself was a regiment with a complicated scheme of badges, officers and tickets. Of scientific pedagogy Lancaster had none: there is something almost touching in the naïve enthusiasm with which he declares, "If 100 boys spell each 100 words for 200 mornings, there will be a grand total of 2,000,000 words spelled in the year!"

Philanthropists and statesmen became interested in Lancaster's work. A royal audience was obtained and the king himself subscribed to the cause, pleased, it is said, by Lancaster's reply to his question as to how one master could keep a thousand boys in order: "By the same method by which thy Majesty's army is kept in order." In 1808 the Royal Lancasterian Society was formed to aid Lancaster's work; this society became in 1814 the British and Foreign Schools Society which still exists and controls about one out of every fourteen of the Voluntary Schools. The "British and Foreign" schools are non-sectarian, but religious; no denominational teaching is allowed in school hours. These schools were favored by the Whig party, the Edinburg Review being always a stout champion.

The work of Lancaster and his Society naturally was viewed with disfavor by the Anglican clergy. These opponents of non-sectarian education, looking about for a man capable of organizing a rival system of elementary schools in which the doctrines of the Established Church should be taught, found Andrew Bell. Bell was a clergyman, rather narrow, intensely practical, definite in his aims, wholly self-satisfied, "a Philistine," says Fitch, "smug," says another biographer, and yet another, "a man vain of his literary ability whose writings show about as much literary skill as the minutes of a banking corporation." While superintendent of the Military Orphan Asylum in Madras he had lighted upon the expedient of setting the older boys to teach the younger; the very Monitorial System which Lancaster had independently discovered. Upon his return to England the church found in him a leader for its educational schemes, and the result was the establishment, in 1811,

of the "National Society for the Education of the Poor in the Principles of the Established Church." The schools founded by the National Society soon became very numerous. At present over four-fifths of the Voluntary Schools are National Society schools. In the early days the religious instruction in these schools was emphasized to an extent almost incredible. In one of the official text-books in arithmetic this is a sample problem: "The children of Israel were sadly given to idolatry, notwithstanding all they knew of God. Moses was obliged to have three thousand men put to death for this grievous sin. What digits would you use to express this number?"

To summarize: The schools of the British Society and those of the National Society both used the Monitorial System, and the curriculum was much alike in the two, except in the matter of religious instruction. The British schools were nonsectarian and made use of the Bible by reading without comment; in the National schools the doctrines of the Established Church were taught. It should be kept in mind that the term "Voluntary Schools" as used in the present controversy includes the schools of the Wesleyan, the Roman Catholic and other societies as well as those of the two societies just mentioned.

Turning now to the second of the historical elements which are essential parts of the present situation, the traditional attitude of the government toward the control and support of schools, we find that until 1833 the British government had given not a penny to the cause of education. In vain Lord Brougham had tried to rouse the British conscience to a sense of its duty to the children of the poor. In 1833, however, in the wake of the Reform Bill agitation, came an event almost unnoticed at the time, but epoch-making in the light of subsequent history: the first governmental grant to elementary schools. The grant was pitifully small, only £20,000, and was not given by act of parliament, for parliament would never have voted it, but was slipped in as an item in the government budget. This grant, it should be noted, was to be administered by the Voluntary Societies. From such a small beginning grew the principle of government aid to voluntary (denominational) societies: a principle which, it has been said, "came to call, and stayed thirty years."

From this time until 1870, education continued to receive alms at the back door of the government. Parliament steadily refused to legislate in regard to education. When the Queen, in 1839, published an order creating a "Special Committee of the Privy Council on Education," the House of Lords marched in procession to carry a protest to the royal palace, fortunately in vain. This Committee, however, controlled the schools only in the sense in which a Scotch fish-wife controls the men of her

family—by holding the purse-strings; since its inspectors had, as their chief duty, to decide whether or not individual schools should receive the government grant.

Still darker days were in store for education. In 1861 the government, looking about for a chance to retrench expenses, instituted through Mr. Lowe (the man who has gone down to history as the Minister who denied the possibility of a science of education) the educational abomination known as Payment by Results. By this scheme the government grant was distributed according to average attendance and "passes" in reading, writing and arithmetic. This is the period of "codes and cram," criticised by Matthew Arnold as productive of mechanical teaching and mere rote-learning. The aim of economy, however, was subserved: the grants decreased; teaching became unpopular, and many teachers found other callings more desirable.

Thus, in 1870, education was little more than a form of pauper relief. The government grant was administered entirely through the Voluntary Societies, the only check upon these societies being the system of inspection by government. With one small exception, up to 1870 there was not a single act of parliamentary legislation in regard to education. Says Craik, "The Statute Book was absolutely ignorant of a system which had involved the expenditure, from public funds alone, of more than 10,000,000 pounds sterling, which was regulating the education of about one-half the children in the country, and which had introduced a new and strange element hitherto unknown to English life. No obligation rested upon a single school manager throughout the country to continue the work he had begun. There was nothing to render it impossible that the voluntary managers should by common consent strike work and thus render the education department a piece of useless machinery, without the steam that was necessary to keep it in motion."

The Liberal party recognized these defects in the existing state of affairs, and saw that the time had now come for making education a subject for parliamentary legislation. In 1870 the Liberals secured the enactment of the Forster Bill, in the framing of which Mr. Gladstone had a large share. This act was epoch-making; most of its provisions remained unaltered for thirty-two years; and a knowledge of its essential features is indispensable to an understanding of the present situation in England.

Turning, then, to the act of 1870, the third of the historical factors which enter into the present controversy, we find that there are two provisions in the act important for our consideration. These are, (1) the institution of School Boards; (2) the establishment of a local rate.

The School Boards thus established are to be the local education authority for boroughs or parishes and are to be elected by the burgesses (of a borough) or the rate payers (of a parish) whenever the Education Department finds that the existing educational accommodation is inadequate. School Boards are to provide school accommodations and maintain the efficiency of the schools. It must be kept in mind, however, that the School Boards have no control whatever of the Voluntary Schools, which may exist as before. The School Boards have to do only with the new "public elementary" schools created by this Act: schools in which the chief instruction is in elementary subjects, and in which no religious instruction is given to which parents object. No religious formula or catechism may be taught in these public elementary schools; this is the provision usually referred to as the Cowper Temple Clause. It should be added that a Voluntary School may become a public elementary school by omitting all teaching of religious formularies except on the one or two days when diocesan inspection is made. It should also be added that School Boards have nothing to do with secondary or higher instruction, as some of them have discovered to their sorrow in recent years.

In regard to the second of the chief provisions of the Act of 1870, the establishment of a local rate, it should be noted that no part of this rate may be given to Voluntary Schools. It belongs exclusively to the new Board Schools. Both Board Schools and Voluntary Schools, however, may receive the government grant, and both may charge tuition fees to eke out their support.

Thus, since 1870, two great classes of schools have existed side by side in England: the Board Schools, administered by the local School Boards, supported partly by a local rate, and prohibited from giving sectarian instruction; and the Voluntary Schools, conducted by the National and other religious and philanthropic societies, supported by the contributions to the societies, by the government grant and by fees, and offering instruction in church doctrine. In 1902 the number of Board Schools was 5,878; the number of Voluntary Schools 14,275, over four-fifths of the Voluntary Schools being administered by the National Society and therefore under the control of the Church of England.

Such was the situation in 1902. Mr. Gladstone, shortly before his death, had predicted that the next great issue in English politics would be an educational one, and the prediction was fulfilled in the agitation over the Education Bill of 1902.

The bill was framed by the Conservative party: its chief provisions are attributed to Lord Salisbury and Mr. Balfour. The measure was deemed so important that, contrary to custom, it

was taken charge of in the House of Commons by Mr. Balfour himself. It met with severe criticism and bitter hostility during the fifty-nine sessions in which it was discussed in the House, Mr. Bryce being the leader of the Opposition. It was felt, indeed, that the life of the Conservative Ministry was staked upon the passage of the Bill.

The first reading was on March 24, 1902. It was introduced into the House of Lords December 3, 1902, and received the royal assent December 18, 1902.[1] The end was reached only by the "guillotine application of the right of closure."

The opposition to the Bill did not cease with its enactment. Soon after it became operative, Wales was in open revolt against it, and there were in England 55,000 Passive Resisters, persons who for conscience's sake refused to pay the local rate, and who allowed their furniture to be levied upon by the local authority. I have before me a bright-colored poster dated September 25, 1903, in which it is announced in large headlines that "the goods which have been forcibly taken from the houses of several persons who have refused, on conscientious grounds, to pay the education rate, will be sold at the Crown Hotel on Friday next," and that "a public demonstration in favor of the repeal of the Education Act will be held immediately after the sale." This resistance has not yet ceased. Nonconformist ministers here and there still preach against what they term the Great Betrayal. Many mass meetings have been held to protest against what is called "an attempt to wrest from us our religious liberties and the right to educate our children." The Nonconformist, as he sees his tables and chairs beneath the auctioneer's hammer, feels himself a modern Hampden, upholding the liberties of his country.

What then, are the provisions of the Act of 1902 which have caused this state of affairs?

In his opening speech, Mr. Balfour, as reported in the London Times of March 28, 1902, stated the purposes of the Bill to be as follows:

1. To bring all forms of education (primary, secondary, and technical) under *one* form of control.
2. To remove the causes of denominational dissension.
3. To provide for the training of teachers.
4. To devise a scheme for the continuance of the voluntary schools.

[1] The Act applies to Wales and England, except London. A special Act known as the Education (London) Act, 1903, was passed August 14, 1903, for London. The principles of the Act of 1902, are embodied in the (London) Act of 1903. The Local Education Authority for London is the London County Council. The Education Committee will consist of Members of the Council, with one woman member and a possible body of experts.

In the light of subsequent events the second of these statements reads strangely. The third we may pass by for the present as it is not a main subject in the controversy. The real issue is in the method by which it is proposed to carry out the first and the fourth of Mr. Balfour's principles. The parts of the Act which embody these methods may be briefly summarized:

A. The Act of 1902 abolishes the School Boards (established by the Act of 1870) and the School Attendance Committees (established in 1876) and substitutes a Local Education Authority, namely, the County or Borough Council. In other words, education is handed over to municipal and county control; it is no longer managed by a School Board elected *ad hoc*. It should be noted that this Local Education Authority is to control both "Provided" Schools (the former Board Schools) and "Non-Provided" Schools (the former Voluntary Schools).

Each Local Education Authority (Council) shall establish an Education Committee constituted as follows: (1) a majority of the committee must be appointed by the Council and (except in counties) must be members of the Council; (2) where it is desirable, persons of experience in education and nominated by other bodies may be appointed; (3) women must be included.

Moreover, each public elementary school is to be governed by a body of managers:

(1) In "provided" schools the managers are not to exceed six and are appointed by the Council.

(2) In "non-provided" (voluntary) schools the managers are not to exceed six, not more than two of these being appointed by the Council, and not more than four being *foundation* managers. Thus it becomes almost certain that two-thirds of the managers will be of the religious denomination to which the school belongs.

The new Act, therefore, places each elementary school under a body of Managers and a Local Education Authority (Council), the latter delegating most of its administrative details to its Education Committee. The duty of levying the education rate, providing new schools, and inspecting schools is vested in the Local Education Authority. The duty of appointing and dismissing teachers is vested in the Managers, subject to the approval of the Local Education Authority. Head-teachers in non-provided schools are subjected to a religious test.

B. Under the new Act the expenses of maintaining public elementary schools are met, in part, out of the local rate. It will be remembered that under the Act of 1870 the local rate could be applied only to the support of Board Schools; under the Act of 1902 it is applied to both provided and non-provided schools.

C. The most important provision of the Act in regard to the religious instruction to be given in non-provided schools is the so-called Kenyon-Slaney Clause, which reads as follows:

"Religious instruction given in a public elementary school not provided by the local education authority shall be, as regards its character, in accordance with the provisions, if any, of the trust deeds relating thereto, and shall be under the control of the managers. Provided that nothing in this sub-section shall affect any trust-deed for reference to the bishop or superior ecclesiastical or other denominational authority, so far as such provision gives to the bishop or authority the power of deciding whether the character of the religious instruction is or is not in accordance with the provision of the trust deeds."

Such are the most important of the provisions of the Act of 1902 which affect elementary education. The controversial literature on the subject is too voluminous to admit of detailed discussion, but the chief objections which have been urged against the Act by Liberals and Nonconformists may be grouped in two classes:

1. *Objections to the administrative bodies created by the Act.* The opposition in this case takes several different forms.

Many of the Liberals find in the new Act not the single educational authority promised by Mr. Balfour but three new authorities in addition to the Board of Education: the Councils, the Education Committees, and the Managers. Mr. Bryce finds this a serious objection to the Act. Instead of simplicity the Act brings multiplicity of authorities.

Moreover, it is urged, the Education Committees are not directly responsible to the rate-payers, although these Committees will probably discharge the most important functions of the local education authority.

But a still more emphatic protest is made against the administrative system of the new Act, because it abolishes the School Boards established by the Act of 1870. The School Boards themselves were unwilling to be abolished, and many educators testify to the good work done by these Boards, especially in the large cities. Sir George Kekewich, a former Secretary of the Board of Education, goes so far as to say that the London School Board perished because it offended the Tory government by doing its work too well; indeed, he adds, the London School Board did a greater work in a shorter time than has ever been accomplished by any educational authority in the world. The School Boards elected *ad hoc*, devoted themselves to education, while to the Councils, education is but one among many functions, and will naturally receive less attention.

2. *Objections to the status given by the Act to the Volun-*

tary Schools.[1] Under the new Act, non-provided schools as well as provided schools are supported, in part, out of the local rate. Mr. James Bryce declared the Bill to be "not an Education Bill, but a Voluntary Schools Endowment Bill." Sir Joshua Fitch declared that the purpose of the Bill was to give the denominational system a renewed chance of permanence." Says Principal Fairbairn, "It uses civic money for purposes the citizen conscientiously detests; these purposes being not civic, but sectarian." Another speaker adds, "It quarters church schools on the public purse, and yet leaves the control to the church."

An analysis of the Nonconformist and Liberal position will show three important objections made to the maintenance of non-provided schools from the rates.

(1) Under the new Act two-thirds of the Managers of these schools will be denominational. (2) The head teachers are subjected to a religious test. (3) The Kenyon-Slaney clause perpetuates denominational teaching.

The view of the Act held by the average Nonconformist is well expressed in a recent article in the Contemporary Review: "The Voluntary Schools . . . are still 'her' (the church's) schools, while eleven pence out of every shilling comes out of the citizen's purse. The teachers are practically hers to appoint and to dismiss, and the teachers make the schools. Her monopoly in thousands of country districts is practically secured, her authority confirmed, her propaganda invigorated by immunity from bankruptcy."

Let us glance briefly at the arguments adduced in support of the Act by the Anglican clergy and the Conservative leaders.

1. The Church of England has, since 1814, contributed to the support of the Voluntary Schools. The buildings and endowments are hers by ancient right. What more reasonable than that she should dictate the form of religious instruction and should appoint the head teachers?

2. The English people are opposed to secular education.

[1] I quote the peroration of a sermon on the Education Act as an illustration of the seriousness with which this phase of the question is viewed by Dissenters.

"I will not submit to this modern Nebuchadnezzar. I have broken down my bridges and burned my boats. In this battle right beside my fellow Free Churchman I will stand. For a measure so treasonable to the liberties of Englishmen . . . I will not subscribe, no, not a penny. The time has come as truly as it came to Peter and John, . . as truly as it came to Martin Luther . . . as truly as it came to John Hampden . . . as truly as it came to John Bunyan . . . . the time has come when every man must boldly stand by the decision of his conscience. To men of conscience it is not . . . a balance between pictures and armchairs and right. These things are nothing. Truth! liberty! righteousness!"

They wish some kind of religious instruction to be given to their children. Many, it is true, advocate what they call "undenominational religious teaching." This seems plausible, but is open to objection. As Lathbury says in a recent article, "Their idea seems to be that all religions are alike up to a certain point. Undenominationalism is the stock which serves as the common foundation of all soups. Denominationalism is only the flavoring which differentiates one soup from another." But, to quote the same writer, "what is surprising is that Nonconformists should equally desire to see this sort of teaching (undenominational religious instruction) made universal and provided at the cost of the rate-payers." "Established Undenominationalism" is as offensive to the Church as is Established Anglicanism to Dissenters.

3. The Act is to be regarded as a compromise. The church concedes much. She gives her school buildings into municipal control. Though she retains the right to appoint her own head teachers, she gives to the Managers the privilege of appointing assistant teachers. For thirty-four years the Nonconformists have had the benefit of the Cowper Temple clause in the Act of 1870. These and many other provisions are real concessions.

4. But the argument that is the basis of all others is the existence of an Establishment. Why should not the religious instruction in schools supported in part by parliamentary grant be of the form established as the state religion? Granted an Establishment, public support of Voluntary Schools is a necessary inference.

These, briefly, are the main lines of argument for and against the Act. There is a very general feeling that the Act will not long go unamended. The difficulties in Wales are still far from being solved, despite the coercive measure passed a few months ago—the Welsh Defaulting Act. Many forms of amendment have been suggested to meet the situation in England. One of the most remarkable is the proposition of the Bishop of Bath and Wells to establish, in connection with the Board of Education, "a clearing house, solely to relieve the consciences of those who profess to be oppressed." Each rate-payer who is conscientiously opposed to paying any rate toward the support of voluntary schools is to earmark his rate "for the support of provided schools only." An adjustment of the rates in different localities can be easily made at the clearing-house. The idea of relieving one's conscience by means of a clearing-house is at first rather startling.

Of all the proposed forms of amendment, perhaps, that which seems to meet with most approval is the suggestion that the local education authority should assume entire control of

secular instruction, taking over all Board Schools, and renting all buildings occupied by Voluntary Schools. Each denomination may then provide, at its own expense, instruction in religion and church doctrine for children whose families apply for it.

In Hertfordshire an amicable adjustment has been made of one of the religious difficulties. A committee composed of Churchmen and Nonconformists has drawn up a syllabus of religious instruction for use in the schools. The following recommendations are made, as reported in the Educational Times, November 1, 1904:

(1) The Bible shall be read, and such explanation and instruction in Christianity and morality given therefrom as are suited to the capacity of children. (2) Any part of the Bible may be learnt by heart, in addition to the portions prescribed. (3) The lessons should be as practical as possible, and especial pains should be taken by the teacher when teaching the Old Testament to show where, by the teaching of Christianity, we have in any case outgrown primitive religious views, and pictures should be used. (4) Working lists of lessons based upon the syllabus should be drawn up at the beginning of the school year by the head teacher of each school and submitted to the inspector of the County Council at the time of religious inspection.

Despite such sporadic cases of amicable adjustment of difficulties, the success of the Act is still problematic. Even that most conservative journal, the Educational Times, has to admit that "anticipations of the gradual disappearance of differences, and the rise of a common ideal of promoting education apart from political and religious views seem dependent upon a very large 'if.'"

Leaving, now, this brief account of the great controversy after the Act of 1902, let us turn to a closer examination of the schools themselves. It may be helpful, in the imperfect conspectus of the system which can be given within the limits of this paper to group the main facts under the headings, Administration, Teachers, Attendance, Curriculum and Finance.

1. *Administration.* The Board of Education, which was established by the Board of Education Act, 1899, and is the successor of the Committee of the Privy Council on Education (1839), and the Education Department (1884), stands at the head of the administrative system. The Board consists of a President and the Lord President of the Privy Council (though these may be the same person), the five Principal Secretaries of State, the First Commissioner of the Treasury, and the Chancellor of the Exchequer. The President is appointed by the Crown; the others are members *ex officio*. The Board is authorized to appoint

such secretaries and officers as may be needed. A Consultative Committee is appointed by the Crown, "consisting, as to not less than two-thirds, of persons qualified to represent the views of universities and other bodies interested in education;" in other words, a committee, two-thirds of the members of which must be experts in education. As a matter of fact, the Consultative Committee, now consisting of eighteen members, is a strong committee, with great opportunities for influence and usefulness.

The Board of Education has control of Elementary Education (Whitehall Office), of Science and Arts classes (South Kensington Office), of the inspection of secondary schools on the application of these schools, and of certain educational matters formerly under the control of the Charity Commissioners. Under the Act of 1902, it is also empowered to settle disputes between managers of non-provided schools and local education authorities, and disputes regarding provision for new schools, to enforce provision for elementary education and to make provisional orders for education committees.

Each public elementary school has (1) a body of Managers, responsible to (2) the Local Education Authority which appoints (3) an Education Committee, and is responsible, in part, to (4) the Board of Education. This Board of Education has been well described by Brereton as a "mean between the Bureau of Education in the United States and the strong, centralized Ministry of Public Instruction in France." The Board (1) administers the parliamentary grant, (2) arranges for the inspection of schools, (3) keeps (through its Consultative Committee) a Registry of Teachers, and serves (4) as a bureau of educational information. Since the Act of 1902, the administrative work of the Board has been carried on in three departments: Elementary Education (the Whitehall Office), Secondary Education, and Technical Education (South Kensington Office). Each department is under the charge of a Principal Assistant Secretary.

The Inspectorate of the Board (Whitehall Office) includes the following inspectors of elementary schools: 1 Chief Inspector; 11 Divisional Inspectors, each having charge of the elementary schools and training colleges in his division; 87 Inspectors; 23 Junior Inspectors, six of these being women; 52 Sub-Inspectors; 11 Sub-Inspectors for special subjects, such as manual training; 20 Examiners. Since 1882, educational experience, as well as scholarly attainments, has been required for appointment to inspectorships. No clergyman may be an inspector. Inspectors may visit schools without notice. They are expected to report to the Board upon the efficiency of the schools and this report determines the giving or withholding

of the grant. Not only the teaching but also the sanitary condition of the school and the book-keeping of the managers are fit subjects of investigation. Indirectly, of course, the Inspector can exert a decided influence upon the methods of teaching, though this is not the primary function of his office.

The Register of Teachers is kept in two columns, A and B. A includes the names of all certificated teachers; B, teachers holding one or more scheduled qualifications, such as a university degree or a diploma.

The Board exercises its function as a bureau of educational information by the publication of its own Reports and also the Special Reports, the latter until recently under the direction of Dr. Sadler. It publishes, also, from time to time, the Code, a digest of minutes and legislation.

2. *Teachers.* The Board of Education recognizes six grades of teachers: (a) Probationers, who must be approved by the Inspector and must be between 13 and 16 years of age, and who may teach only half-time; (b) Pupil-teachers, who must pass an examination before appointment, and must be between 15 and 18 years of age, and must not teach more than 20 hours in one week; (c) Provisional Assistant Teachers, who have completed their engagement as Pupil-Teachers but are not yet ready for the next grade of work; (d) Assistant Teachers, who have passed the King's Scholarship Examination, the final examination for Pupil-Teachers, or who are graduates of universities; (e) Provisionally Certificated Teachers, who have obtained a place in First Class of the King's Scholarship Examination, and who have had the requisite teaching experience; (f) Certificated Teachers, appointed on the basis of examination and proficiency in teaching.

One of the distinctive characteristics of English education is the pupil-teacher system. English writers on the subject very generally approve of the system on the ground that it lessens expense, gives to the child some teachers nearer his own grade of intellectual development, and provides training of teachers at a time when their minds are most open to new ideas and their whole personality most plastic. It must be acknowledged, though, that such a system is open to some of the objections which were made to the old monitorial system. Some of these dangers are lessened, however, by the care that is exercised in providing suitable instruction for pupil-teachers, such instruction being given either by the head-teachers or in "Central Classes."

. Of the teachers employed in the public elementary schools 76% are women. The average salary of a certificated schoolmistress is £86; of a certificated schoolmaster, £129. By

contributing a certain sum annually, a teacher may, at 65 years of age, receive a superannuation allowance.

Provision for the professional training of teachers is made by the 65 Training Colleges, of which 46 are residential and 19 are day training colleges.

3. *Attendance.* In the Board of Education Report for 1900-1901 the laws in regard to compulsory attendance are thus summarized:

(1). If the by-laws contain a special provision to that effect, children may be employed in agriculture at the age of eleven, provided that they attend school 250 times a year up to the age of thirteen.

(2). With this exception, no child, subject to the by-laws, can obtain either partial or total exemption under the age of twelve.

(3). A child between twelve and thirteen, or (if the by-laws are extended) between twelve and fourteen, can only obtain total or partial exemption on the conditions prescribed by the by-laws.

(4). In districts where the by-laws are still restricted to children of thirteen years of age, a child between thirteen and fourteen can obtain total exemption either on passing the Fourth Standard, or on making 350 previous attendances after five years of age in not more than two schools during each year for five years.

(5). A child between twelve and fourteen may claim partial exemption on making 300 previous attendances annually for five years, but in the view of the Board this exemption can only be claimed where the by-laws themselves contain a provision for partial exemption.

It should be noted that an "attendance" means, for infant scholars, one and a half hours; for older scholars, two hours; for "half-timers," one hour and twenty minutes.

4. *Curriculum.* Three classes of elementary schools are recognized by the Board of Education: Infant Schools, for children from three to seven years of age; Schools for Older Scholars, for children up to the age of sixteen; Higher Elementary Schools, for children from ten to fifteen years of age.

Elementary schools must limit themselves strictly to elementary subjects, if they would obtain the parliamentary grant which, for elementary education, is administered through the Whitehall Office. This point was tested in the courts in 1898, in the famous Cockerton case. Mr. Cockerton, as auditor, disallowed the expenses charged by the London School Board for paying the salary of teachers of drawing for classes in Board Schools, the teaching having been of technical rather than elementary character. The courts sustained this decision, thus

emphasizing the distinction between the function of Whitehall and South Kensington.

The course of instruction in Infant Schools includes reading, writing, number, simple lessons on common things, needlework, drawing, singing, and physical exercises.

In Schools for Older Scholars, the course of instruction includes three classes of subjects: (1) "Obligatory" subjects: English, arithmetic, drawing (boys), needlework (girls), lessons in geography, history and "common things," singing and physical training; (2) the class of subjects formerly called "specific," one or more of which is to be taught when the inspector deems it advisable: algebra, Euclid, mensuration, mechanics, chemistry, physics, animal physiology, hygiene, botany, agriculture, horticulture, navigation, Latin, French, Welsh (in Wales), German, book-keeping, shorthand, domestic economy, drawing (girls), needlework (boys); (3) special subjects, earning a separate grant: cookery, laundry, dairy, household management, cottage gardening, manual instruction.

The Higher Elementary Schools are for children from 10 to 15 years of age who are certified by the Inspector as qualified to profit by such instruction. "The special object which they have in view is to qualify the children taught in them to enter any of those callings in which scientific methods have to be employed." In 1903 there were 29 schools of this kind.

In the Schools for Older Scholars, seven "standards" are recognized, standards of examinations in reading, writing and arithmetic.

The method employed most commonly in the elementary schools of England is that of recitation of lessons prepared from a textbook. Oral instruction is seldom found to the extent that it is in Germany. The teaching is characterized by thoroughness, though this virtue sometimes brings in its train the kindred vice of rote-learning and mechanical teaching.

5. *Financial Support of the Schools.* Elementary Schools are supported from three sources of income, the government grant, fees of pupils, and the local rate. The government grant consists of principal grants and special grants, the former being paid on the basis of average attendance, the latter for the teaching of special subjects; a school in which cookery is taught, for instance, receives a special grant of 4 shillings per pupil in average attendance. The fees of pupils cannot exceed 9 pence per pupil per week. About 12% of the pupils in elementary schools now pay fees, though the Act of 1891 provides for a special grant to schools that remit fees.

The system of elementary education in England must be recognized as a wholly indigenous product. German, French, and American educational ideals have had little to do with the

shaping of English educational policy, a policy that embodies the religious, social, and political ideals of the English people to an extent difficult for an outsider to realize. The present crisis has brought the subject of education before the masses of the people as never before, and the mere discussion of the theme must result in some good. It would not be astonishing, however, if the next great advance should be due to the emphasis given to the connection between industrial prosperity and popular education, the theory which called the Mosely Commission into existence and which has inspired several recent books in the domain of economics.

The Bibliography which follows is not an exhaustive one, and includes only a few titles of controversial articles.

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THE QUESTION OF METHOD IN NATURE STUDY.

By Michael F. Guyer, University of Cincinnati.

The practical question of what material to use is the one which many teachers will say presents the greatest dfficulty in nature study. The writer is thoroughly convinced, however, that it is not so much a question of material as it is need of a practical method. Teachers who have become disheartened in the matter have done so largely because in first facing the question of material, they have overlooked the more fundamental one of method.

Any method, to be successful, must make the separate qualities of a given object stand out to the perception of the child and lead him to make his analysis and subsequent reconstruction in an orderly manner. The problem becomes all the more intricate if, as in the average city school, the teacher is dealing with large classes, for then the formula for analysis must be adapted to fit the weakling as well as the strong; it must be a method of making not only a particular pupil, but all, receive the successive emphasized impressions.

In the case of animals, for example, the first questions for the teacher to decide are, just what is there to see about animals? What can children be led to see?

What questions do children ask about animals? They would run about as follows: What does it do? How does it do it? What 's it good for? How does it work? In other words, a child is interested in structure only as applied to action. He wants to know the business of animals and how they attend to it.

It is true that an ordinary crawfish, in terms of structure, is an astacoid macruran decapod, but never mind that. What the child is interested in is that it eats, and what and how it eats. He soon learns that it can protect itself, as is evidenced by the wary way he goes about picking it up after being once nipped by its pincers. He sees, too, that it is adjusted to its physical surroundings, or in other words, that it is adapted to live largely in the water. He can perceive all of these things and more without even suspecting that it is an astacoid macruran decapod, and he will have made considerable advancement in nature study too.

The following simple outline is, I think, applicable in teach-

ing, from the primary school to the university, for it can be followed out in just as small or as great detail as is desirable. In actual practice it has worked very satisfactorily in a number of the Cincinnati public schools. It is based entirely upon what animals do.

Animals, from their own point of view, have two and only two occupations in the world. These are, (1) to care for themselves, and (2) to care for their offspring. Consequently, every important thing to be seen about an animal has to do with one or the other of these pursuits. This is as true of internal as of external structures; in the nature-study work, however, we confine our attention for the most part to external features.

For taking care of themselves, animals must possess organs (a) for procuring and transforming food, (b) for protecting themselves from enemies, and (c) for adapting themselves to surrounding physical conditions.

This outline will be more easily remembered if studied in tabular form:

THE BUSINESS OF ANIMALS.

I. To Care for Themselves.
   a. Food: finding, securing and transforming.
   b. Self-protection.
   c. Adjustment to physical surroundings.
II. To Care for their Offspring.

Thus, the fundamental structures of animals, or plants for that matter, are simply answers to the demands of their business as stipulated in this table. Differences in structure and habits, therefore, are due largely to different methods of meeting these necessities of life. A given organ, once established, frequently fulfills more than one of these functions, but the point is that these and only these occupations concern the animal.

Much of the machinery of any animal is connected with the prime necessity of obtaining food and drink. Unlike plants, animals do not have their food at hand in soil or air. They must seek for it. Thus have arisen the various types of legs, wings and other organs of locomotion. Organs of locomotion alone would be of little service to the animal, however, if it had nothing to direct them; there must be a centre of control and this is provided ordinarily in the central nervous system. The animal requires, moreover, some mechanism to give it knowledge of objects at a distance, hence have arisen such structures as eyes through which it receives information by means of light, ears for sound, a nose for odors, etc. These

organs may serve more than one purpose, of course, when once established. They are, for example, as necessary to herbivorous animals for escape from being made food of as to aid them in finding their own food.

When an animal once confronts its food, however, it must still meet the difficulty of getting it into its body. The food is solid, perhaps, and must be subdivided, or it is alive and must be killed before the animal can use it. There must be some organ or organs, therefore, such as mouth, trunk, claws, hands or the like to serve in this capacity, and still modifications of these organs or additional organs to grind or cut the food into small bits that it may be passed on into the body to be digested. Such organs range from the commonplace to the grotesque and their nature depends very largely upon the character of the food; it requires different machinery for killing and rending flesh from that which must serve for plucking grass or for grinding grain.

Before leaving the subject of food it should be mentioned that such structures as those for breathing and for the circulation of the blood are concerned with nutrition no less certainly than the more evident organs of alimentation. The blood distributes digested food to where it is needed in the different parts of the body, and oxygen, which is obtained by breathing, must be present before the food can be used by the tissues. With very young pupils it would not be desirable, of course, to attempt to lead out the more intricate topics of digestion or of other physiological functions. It should be noted, however, that the whole question of digestion, circulation, etc., can be brought out in a very interesting manner for students of physiology by such an interpretative method. The emphatically important thing, whether in nature-study or physiology, is that the interpretation be made by the child, not by the teacher. The latter should simply guide by means of relevant questions.

It is needless to take the space for a detailed discussion of self-protection and the remaining subjects of the synopsis, because the many simple interpretations along these lines which children may be led to make, are obvious. It may not be amiss, however, to indicate briefly a few of the more general topics.

In defending themselves, some animals, of course, frequently make use of the same weapons as serve them in securing their food. Such structures, on the other hand, as the armor of the turtle or of the armadillo, or the barbed spines of the porcupine, are instances of organs more exclusively protective in nature. Besides the many obvious examples of armor, of fleetness or of strength which serve to protect various animals, much of the color observable would come under the heading of protection from enemies.

Many of the most evident adaptations of animals are concerned, perhaps, with adjustment to physical surroundings such as, for example, the element in which the animal dwells. Thus, animals such as fishes, which live in water, must have mechanisms for breathing or for locomotion necessarily very different from those which are terrestrial in habit. Again, flying forms require a type of propelling organs different from that of forms which walk upon the surface of the earth. It is this necessity for physical adjustment, furthermore, that gives rise in cold climates, to the furs, fleeces and downs to be met with in such profusion. Not only structure, indeed, but habits as well, vary under different climatic conditions. The hibernation practiced by some animals is a good example of adjustment to climate by means of habit. It will be found that many structures which may be looked upon as coming under the heading of adjustment to physical surroundings, may also be considered from another aspect under the topic of food.

As examples of adaptations to meet the second business of animals, viz., caring for offspring, may be mentioned the diverse types of cocoons, nests or pouches for housing the newborn, the manifold provisions for feeding the young, and various signals to attract their attention.

Before leaving the synopsis, I wish to indicate, under each of the headings, a number of general questions which will be serviceable in bringing out systematically the various phases of animal life or structure. The questions are comparatively few in number and so simple that a novice can determine answers with some degree of satisfaction, and yet, if one learns the complete answers to them he knows practically all about a given animal that the trained naturalist can ascertain.

The Business of an Animal.

1. TO CARE FOR SELF.

a. *Food.*

1. What does it eat? Special preferences?
2. How does it get information about its food, *i. e.*, what senses has it? How do they serve it? Are they advantageously located for the work they have to perform?
3. How does it get to its food (*i. e.*, how fitted for locomotion)?
4. What organs are helpful to it in eating? How are they adapted to its particular kind of food?
5. Does it snare or lure its prey? Is its color ever of advantage in securing food?
6. Does it lay up a store of food, or merely eat what it needs each day?
7. Does it work during the day or night?
8. How does it breathe?
9. (Digestion, circulation, etc.,—to be omitted for young children.)
10. Do its food habits make it a friend or an enemy of man?

Cf., also b, 4.

b. *Self-protection.*

1. What are its enemies and how does it escape them (weapons, armor, flight, etc.)?
2. Can its color or general appearance help it to escape in any way? Has it any means of signalling to its own kind? If so, does such ability protect it in any way?
3. Has it a home or regular place of resort?
4. Does it lead a solitary life, live in a community of its own kind, or live with unrelated forms? If colonial, and if there is division of labor in the colony, what part does each member perform? Differences of the various members in structure and habits?
5. To what diseases is it subject? Can it convey these or other diseases to man?

c. *Adjustment to Physical Surroundings.*

1. Where does it live (geographical locality; ground; water; leaves, roots, or stems of plants; etc.)?
2. How is it fitted in general form and in the special conformation of its organs to its place of abode? *Cf.*, Locomotion and Sensation, 2 and 3 under 1, a.
3. How is it protected against extremes of temperature, moisture or drought? Where does it go in winter? In foul weather?

II. TO CARE FOR OFFSPRING.

1. Is the animal an egg-laying form or are the young born alive? If an egg-laying form, where and how does it deposit its eggs?
2. How are the young nourished? What provision is made for their safety? To what extent are they taught by their parents? *Cf.*, also 3 and 4 under 1, b.
3. How long does the animal live? What length of time are the young in maturing?
4. Do the young undergo a pronounced change in form (metamorphosis) while developing into the adult, or do they principally increase in size?
5. Is there rivalry for mates (battle, song, parade of cleverness or of color)?
6. (What changes have come about during the ancestry of the race? Were they advantageous? *To be omitted for children.*)

Plants.

As regards plants, it is evident that the same general synopsis will answer, for the business of plants is the same as that of animals. While the *same problems* confront plants, the solutions of these problems are largely by *different processes.*

The Business of Plants.

I. TO CARE FOR THEMSELVES.

a. *Food.* Most plants (*e. g.*, tree) get food from the air (hence leaves) and earth (hence roots); consequently the adaptations of plants must differ from those of animals.

1. No organs of *locomotion* ordinarily, because food surrounds plant.
2. No organs of *special sense* (eyes, ears, etc.) because it is unnecessary for plants to get information of objects at a distance.
3. Besides getting food-products, the green plant must make

its own food, hence the presence of special machinery ("leaf-green") and devices for arrangement of the same.

4. Remaining topics (respiration, etc.) noted under animals apply to plants.

5. Plants, not green, nourished largely by organic foods.

6. Insectivorous plants capture insects, etc., for food, apparently.

b. *Self-protection.* Not active opposition or flight as in many animals, but *passive defense* against,

1. Attacks of animals or other plants. Met by
   —Distasteful or poisonous substances.
   —Armor (prickles, spines, thorns, hairs, etc.).
   —Mimicry, possibly in a few.
   —Utilization of allies such as insects, etc.
2. Too much or too little water.
3. Too much or too little light.
4. Extremes of temperature.
5. Breaking by wind, water, etc.
6. Poisons in soil.
7. Competitors for favorable position. (The plant is often aided in this struggle by the possession of long roots, ability to grow in shade, etc.)

c. *Adjustment to Physical Surroundings.*

1. Advantage of greater absorbing surface in vast number of flattened organs (foliage leaves), rather than solid compact top.
2. Similar advantage to plant in having many branched roots instead of a single one for absorption and as a hold-fast.
3. The *light relation* is especially important, since without sunlight green plants are unable to construct food from the gases of the atmosphere and the substances in plant sap. Methods of growth, therefore, are largely to enable plants to get best position with reference to light to do life-work.
   (a) *Plant stems.* Two principal methods of development.
      (1) Predominant plants of a region avoid too great shading by elongation of stem=*forest* as extreme type.
         Climbing and twining plants,
      (2) Predominant plants, short-stemmed forms which crowd each other beneath the soil=*prairie* as extreme type.
         (Two "societies"—overgrowth and undergrowth—frequently inhabit the same region).
   (b) *Arrangement of leaves.* Mat or carpet habits; leaf mosaics; rosettes; shape of leaves as modified by relation to one another on tracts; size of leaf with reference to illumination, etc.
4. Other adjustments must be to heat, the pull of gravity, mechanical forces (as air and water), moisture, soil, electricity, etc., other phases of which have been included under the heading of self-protection.

II. TO CARE FOR OFFSPRING.

a. *Propagation.* Seed, slips, runners, etc.
b. *Protection.* Burrs, nuts, green fruit, etc.
c. *Storage of food.*
d. *Provisions for distribution of seed or spores.*
   1. By animals (fruits, burrs, hooks, nuts, etc.).
   2. By wind (floats, wings, tumble-weed, etc.).
   3. By water.

4. Other devices (plants which shoot off spores or seed, self-propelling devices, etc.).

Finally, if the parallel between the business of plants and the business of animals is pursued still farther, it will be apparent that almost all of the questions indicated on pages 89 and 90 for the study of animal life are equally applicable to plant life.

CHILD STUDY AT CLARK UNIVERSITY.

By Theodate L. Smith.

In January, 1903, a short article by Dr. G. Stanley Hall appeared in the *American Journal of Psychology* giving a list of the topical syllabi issued by Clark University since the beginning of the child study movement in 1894, and also a list of published books and studies, sixty-four in number, based wholly or in part on these syllabi. A plan for the extension of child study by securing the co-operation of institutions and individuals interested in child study both in the United States and other countries was announced, and this is being gradually realized. The record of the work already accomplished in this line since the publication of the above plans is encouraging. Over seventy promises of co-operation, domestic and foreign, were received in answer to a circular letter sent out by Dr. Hall and many of these have been most generously fulfilled. A larger amount of material has been collected by the questionnaire method than has hitherto been possible and the quality of the data has been of a high order. Through the co-operation of teachers excellent material has been gathered directly from children and this has been supplemented by observation, reminiscence and introspection, by pupils in normal schools and colleges and by teachers. England, through Miss Chevallier of the British Child Study Association, and Miss Young of the Home and Colonial College, has contributed valuable data to the University. Madame Grudzinska, of Poland, has collected and translated data which would otherwise have been quite inaccessible and has also translated into Polish a number of Clark University child study publications. Japan has entered into the movement, and Professor Motora, of the Imperial University at Tokyo, has already collected data for the University, and we hope, in time, to have many valuable contributions from that country. Italy has just sent to us, through Professor Maestrini, the names of seventy Italian educators who have enrolled themselves as co-operators in the new movement for international co-operation. Several of the Clark University syllabi have been printed in the best Italian educational magazines and answers to these are promised next June. Italy has already made extensive contributions to child study, the most important contributions being in the field of criminology and

defective children. The names of Mosso, Mantegazza, Vitali, Marro and Ferriani and Paola Lombroso are familiar to all interested in child study, and if to these the names of Italian anthropological investigators should be added, the list would grow beyond the limits of the present article.

A list of the syllabi issued and of the studies based wholly or in part on questionnaire material since March, 1903, is appended to this article, thus bringing the previous list of sixty-four books and articles up to date. But these by no means represent all of the work accomplished. Experimental studies along lines not suited to the questionnaire method have been carried on and several are still in progress. Several studies in individual psychology have been made by those connected with the University, and the growing interest in child study all over the country is manifested by the number of letters received by the department on individual problems and from child study clubs formed by mothers and teachers. Several of these have asked to work under University direction and it has been a part of the work done by the department to furnish suggestions and selected bibliographies on various subjects to those who have asked for them. Some of these have already collected data for the University and, at the present time, a series of experimental tests are being systematically carried out in New York City, under University direction, by a kindergarten club of twenty-five teachers and the teachers of a high school gymnasium which has two thousand pupils. In time these clubs will doubtless become a source for the collection of data which will be of great value to the University.

There is also published annually in the *Pedagogical Seminary* a bibliography of child study which the compiler, Mr. Louis N. Wilson, Librarian of the University, spares no effort to make as complete and helpful as possible.

It is not yet a decade since the advocate of child study found it difficult to obtain a hearing in scientific circles, yet at the present time it is recognized as an important branch of psychology in our leading colleges and universities. Out of twenty-seven leading colleges and universities from which replies have already been received in reply to a request for information in regard to child study in the curriculum, there are but two who do not include child study, either as a separate course or as an important part of psychology and education. Some of the larger universities report three or four separate courses. The publication of Dr. Hall's "Adolescence" has given the subject a fresh impetus and in one of the universities which have thus far reported, it is being used as a text book, and in practically all of the higher grade of normal schools, child study is a fundamental requisite. The recognition of Clark University

as the leader in child-study research comes with ever increasing frequency from foreign countries. At the time of writing, a letter has just been received from a professor of pedagogy in Bulgaria, asking help and information. Such facts as these give the greatest encouragement for the future of child study, which, though it does not yet lay claim to being a science, is learning through the mistakes inevitable in pioneer work and steadily becoming more scientific.

A. List of Topical Syllabi Issued Since March, 1903.[1]

103. Curiosity and interest, Theodate L. Smith, May, 1903.
104. Stages of religious development, Jean du Buy, May, 1903.
105. Birds and animals, G. Stanley Hall, Oct., 1903.
106. Precocity and tardiness of development, G. Stanley Hall, Oct., 1903.
107. Differences between young and old teachers, G. Stanley Hall, Oct., 1903.
108. Predominance of female teachers, G. Stanley Hall, Oct., 1903.
109. Dreams, G. Stanley Hall, Oct., 1903.
110. Leadership and its opposite, G. Stanley Hall, Oct., 1903.
111. Advertising, G. Stanley Hall, Oct., 1903.
112. Stages of religious development, Jean du Buy, Nov., 1903.
113. Nervous children, T. Kuma, Nov., 1903.
114. Young people's Christian organizations, J. N. Rodeheaver, Nov., 1903.
115. The hygienic condition of normal schools, Wm. H. Burnham, Dec., 1903.
116. A study in the pedagogy of missions, Frank A. Lombard, Nov., 1903.
117. A study in the pedagogy of missions (Japan), Frank A. Lombard, Nov., 1903.
118. The language interest in children (I and II), A. W. Trettien, Dec., 1903.
119. Attention, Alfred A. Cleveland, Dec., 1903.
120. Reaction of pupils to high school work, William F. Book, Jan., 1904.
121. Questions for members of young people's societies, Wm. B. Forbush and J. N. Rodeheaver, Feb., 1904.
122. Crying, G. Stanley Hall, Feb., 1904.
123. Defects in school education, M. W. Meyerhardt, Feb., 1904.
124. Obstinacy, stubbornness and obedience, G. Stanley Hall, Feb., 1904.
125. Information blank on stuttering and other speech defects, Edward Conradi, March, 1904.
126. Keeping well, G. Stanley Hall, March, 1904.
127. The subnormal or supernormal child, G. Stanley Hall and T. Kuma, May, 1904.
128. Psychic reactions to sound, Theodate L. Smith, Nov., 1904.
129. The development of the imagination (I and II), H. L. Brittain, Jan., 1905.
130. The teaching of geography, G. Stanley Hall and David Gibbs, Feb., 1905.
131. The psychology of clothes, G. Stanley Hall, Feb., 1905.

[1] For Nos. 1-102 see *Am. Jour. of Psy.*, Jan., 1903, Vol. 14, pp. 97-100.

B. Published Articles based wholly or in part on Preceding Syllabi, the Numbers following those of the Latter.

60. G. Stanley Hall and Chas. E. Browne. Children's Ideas of Fire, Heat, Frost and Cold. *Ped. Sem.*, March, 1903, Vol. 10, pp. 27-85.
89. Edward Conradi. Children's Interests in Words, Slang, Stories, etc. *Ped. Sem.*, Sept., 1903, Vol. 10, pp. 359-404.
93. W. Fowler Bucke. Cynopsychoses. *Ped. Sem.*, Dec., 1903, Vol. 10, pp. 459-513.
93. G. Stanley Hall and Chas. E. Browne. The Cat and the Child. *Ped. Sem.*, March, 1904, Vol. 11, pp. 3-29.
98. Lonna D. Arnett. The Soul; A Study of Present and Past Beliefs. *Am. Jour. of Psy.*, April and July, 1904, Vol. 15, pp. 121-200; 347-382.
100. Sanford Bell. An Introductory Study to the Psychology of Food. *Ped. Sem.*, March, 1904, Vol. 11, pp. 51-90.
102 and 14. Theodate L. Smith. Types of Adolescent Affection. *Ped. Sem.*, June, 1904, Vol. 11, pp. 178-203.
102. G. Stanley Hall and Theodate L. Smith. Showing off and Bashfulness as Phases of Self Consciousness. *Ped. Sem.*, June, 1903, Vol. 10, pp. 159-199.
103. G. Stanley Hall and Theodate L. Smith. Curiosity and Interest. *Ped. Sem.*, Sept., 1903, Vol. 10, pp. 315-358.
105. Theodate L. Smith. Psychology of Day Dreams. *Am. Jour. of Psy.*, Oct., 1904, Vol. 15, pp. 465-488.
110. Lewis M. Terman. A Preliminary Study in the Psychology and Pedagogy of Leadership. *Ped. Sem.*, Dec., 1904, Vol. 11, pp. 413-451.
115. Wm. H. Burnham. A Contribution to the Hygiene of Teaching. *Ped. Sem.*, Dec., 1904, Vol. 11, pp. 488-497.
116. Frank Alanson Lombard. Notes upon a Study of the Pedagogy of Missions. *Am. Jour. of Religious Psychology and Education*, Nov., 1904, Vol. 1, pp. 113-128.
118. A. W. Trettien. Psychology of the Language Interest in Children. *Ped. Sem.*, June, 1904, Vol, 11, pp. 113-177.
120. William F. Book. Why Pupils Drop out of the High School. *Ped. Sem.*, June, 1904, Vol. 11, pp. 204-232.
124. Theodate L. Smith. Obstinacy and Obedience. A study in the psychology and pedagogy of the will. *Ped. Sem.*, March, 1905, Vol. 12, pp. 27-54.
125. Edward Conradi. Psychology and Pathology of Speech Development in the Child. *Ped. Sem.*, Sept., 1904, Vol. 11, pp. 328-380.

A BIBLIOGRAPHY OF CHILD STUDY IN POLAND.

By Anna Grudzínska.

The Polish movement in child study was inaugurated by the now venerable psychologist, Vladyslaw David, a man of high philosophical training and a well known pedagogist. His contributions to child study are:

Vl. David. Programme of Psychological Observations on a Child from the First Day to the Twentieth Year. Warsaw, 1887.
—— The Contents of Children's Minds. Warsaw, 1895.

This book is based on a questionnaire of 136 questions answered by 476 Warsaw children, after the method of Berthold Hartmann.

These publications were the first step in child study and two of Prof. David's assistants, Miss A. Szyc and Miss Iz. Moszczénska have since then become independent workers. Following the publication of Prof. David's book, Miss Szyc gathered material from 500 Warsaw children by means of a questionnaire of 55 questions based upon those of Prof. David, the results of which she published in book form.

A. Szyc. *Books.* Development of the Child's Mind. Warsaw, 1899.
—— How to Study Children's Minds. Warsaw, 1900 (2d ed.).
—— Articles on Child Study: On Methods and Problems of Child Psychology. Lemberg, 1901, 2d ed. Warsaw, 1904.
—— *Articles.* How do Children Relate? 1890.
—— Remarks on Little Children, 1891.
—— Types of Imagination, 1893.
—— Abstraction in Life and Education.
(Abstracted and shortened from. *Ped. Sem.*)
—— Plays.
Curiosity and interest, G. Stanley Hall and Theodate L. Smith.
—— *Studies.* What Interests Children Most? 1893.
—— What would you do with a rouble? 1893.
—— What would you like to be when grown up? 1898.
—— Development of Children's Moral Notions.
—— Curiosity of Polish Children.
—— *Studies now in progress.* Child Psychology during School Time for 1905.
—— Questionary on Mental Interests.
—— Study of Flowers.

Iz. Moszczénska.
Translation.
Sully, James, Children's Ways. Miss Moszczénska also writes articles on the psychology and pedagogy of children and adolescents which are greatly valued.

S. Blazck. School Fatigue. Lemberg, 1899.

K. Król. (Editor of the Pedagogical Review at Warsaw.)
Translations.
Tracy, Frederick, Psychology of Childhood.
G. Stanley Hall. Child Study and its Relation to Education. Forum, Aug., 1900.
—— Child Study: The Basis of Exact Education. Forum, Dec., 1893. (Translated from the German of Stimpfl, in Internationale Bibliothek, 1902.)

K. Król and Iz. Mosczénska.
Translations.
Lombrosa, Paola: Vita dei Bambini.
Queyrat, F. La logique chez l'enfant et sa culture, 1902.
Raaf, H. Elementary Psychology.

Anna Grudzínska and K. Król.
Translation. (1904.)
Lancaster, Ellsworth G. The Psychology and Pedagogy of Adolescence. *Ped. Sem.*, July, 1897, Vol. V.

Anna Grudzínska. The following studies translated and shortened. (1904.)
Monroe, Will S. The Money Sense of Children. *Ped Sem.*, March, 1899, Vol. VI.
Sears, Charles H. Home and School Punishments. *Ped Sem.*, March, 1899, Vol. VI.
Eby, Frederick. The Reconstruction of the Kindergarten. *Ped. Sem.*, July, 1900, Vol. IV.
Dolbear, Katherine E. A few Suggestions for the Education of Women. *Ped Sem.*, Dec., 1901, Vol. VIII.
G. Stanley Hall and Theodate L. Smith.
Reactions to Light and Darkness. *Am. Jour. of Psy.*, Jan., 1903, Vol. XIV.
—— Showing off and Bashfulness as Phases of Self Consciousness. *Ped. Sem.*, June, 1903, Vol. X.
—— Fecundity of College Men and Women. *Ped. Sem.*, Sept., 1903, Vol. X.
Theodate L. Smith. Types of Adolescent Affection. *Ped. Sem.*, June, 1904, Vol. XI.
—— Psychology of Day dreams. *Am Jour. of Psy.*, Oct., 1904, Vol. XV.

The translation of Adolescence, by G. Stanley Hall, is also in progress by Anna Grudzínska and the preface and chapter i are already in the printer's hands. Its appearance is eagerly looked for in the scientific circles of Poland.

Two of the best known pedagogists of Poland, now at Warsaw, F. Laganowski and Waldemar Osperloff, have gathered much valuable material which is not yet published.

LITERATURE.

Bericht über den I. Internationalen Kongress für Schulhygiene. 4 Vols. Nürnberg, 1904.

This Report, in four large volumes of more than 500 pages each, contains the proceedings of the largest and most eminent body of hygienists ever gathered to consider the special subject of school hygiene. The president of the Congress was Dr. Griesbach of Mülhausen, and the general secretary, Dr. Schubert of Nuremberg. 1,582 persons participated in the Congress, although not all these were present. Of this number 1,247 were members. While about half of these were from Germany, the international character of the Congress is shown by the distribution of the other half. They represent some 24 different countries from Chili, Uruguay, and Cuba, to Japan and the more distant parts of Russia, with members from Tiflis, Tomsk and Nischnij-Nowgorod. The papers were in three different languages,—German, French and English; and a total of over 170 addresses and papers are included in the Report besides the proceedings of the business meetings and reports of the opening exercises.

The United States was represented on the permanent International Committee by Dr. Bergström, of the University of Indiana, President Nicholas Murray Butler, of Columbia, Dr. Porter of Harvard, and President G. Stanley Hall, of Clark, and by nine members in the Congress (although apparently none of these were present). Contributions to the proceedings of the Congress were made by Prof. Dexter, of the University of Illinois, on "The Influence of the Weather upon the Child;" by Dr. Risley, of Philadelphia, on "The Importance of Examinations in the Development of School Hyiene;" and by the reviewer, on "A Contribution to the Hygiene of Teaching."[1]

The scope of the papers illustrates very well the wide expansion of the field of school hygiene in recent years. Only about one-eighth of the time of the Congress was taken up with matters relating to school hygiene in the narrower sense,—school organization, heating, ventilation, and the like. The larger part of the Report is filled with papers on school diseases, the hygiene of instruction, the hygiene of the school child, the hygiene of the teacher, and the like. The methods of modern school hygiene are also illustrated by the papers and reports of this Congress. Perhaps a score present the results of original experimental or statistical investigation,—studies of growth, disease, defect, etc., and of fatigue and other matters relating to the hygiene of instruction.

Three general sessions of the Congress were held, and among the scientific papers presented were one by the veteran ophthalmologist, Dr. Cohn, of Breslau, "The Contributions of Oculists to School Hygiene;" one by Dr. Sickinger, of Mannheim, "The Organization of Large People's Schools According to the Natural Capacity of Children;" and one by Dr. Kerr, of London, on "School Ventilation." The greater part of the papers, however, were presented at department meetings. The Congress was divided into groups as follows:

Group A, concerned with school buildings, school sanitation, and

[1] See *Ped. Sem.*, December, 1904.

the like, in which were presented papers by such eminent specialists as Dr. Erismann, of Zurich, Prof. Nussbaum, Dr. Hinträger, and others.

Group B discussed the hygiene of boarding schools, methods in school hygiene, and the hygiene of instruction. Such subjects as Co-education, by Dr. Hertel, of Copenhagen; The advantages of One Session for School Instruction, by Hintzmann, Schuyten and Semerád; Over-pressure, by Hergel; Fatigue and Methods of Studying Fatigue, by Sakaki, of Japan, Vannod, of Bern, Adsersen, of Copenhagen, and Altschul, of Prague; "The Necessity of an Experimental Didactic and of Laboratories for Child Study" by Lay, were among the noteworthy topics of important papers.

Group C discussed the hygienic instruction of teachers and pupils. Methods employed in different places were described, and among other papers presented were several on "Sexual Hygiene;" one by Dr. Gutzmann on "The Significance of Voice Hygiene for Teachers and Pupils;" and one on charts and other apparatus for hygienic instruction in the school.

Group D was devoted exclusively to physical education. The breadth of treatment is suggested by the following subjects that were presented: school baths; instruction in swimming; gymnastics and play; organization of physical education in the schools; strength exercises from the point of view of hygiene; physical work as an educational activity; the Olympic movement and the school; hygiene of gymnastics for girls; the physical and mental development of the child during the first school year; breathing gymnastics; correct breathing in the school; vital capacity of students; physical education of youth in Switzerland, in Austria, in Croatia and Slavonia, and in Germany.

Group E was devoted to disease and medical inspection in the schools. Among the concrete subjects discussed were the following: morbidity statistics; the causes of nervousness among school children; the significance of the psychology of development for school hygiene; and there were several papers relating to medical inspection, and a number dealing with sight, hearing, the teeth, diseases of the nose and naso-pharynx, tests of vision, injuries to vision during school life; Stilling's theory of myopia; school and astigmatism; and papers relating to scoliosis, and infectious diseases.

Group F was devoted to special schools and here were presented important papers by Gutzmann on "The Influence of the School on Speech Defects;" by Shuttleworth on "The Educational Treatment of Epileptic Children," together with several other papers relating to epileptics; and the important reports of Sickinger and Dr. Moses on "The Special Class System of the Mannheim People's School."

Group G was devoted to the hygiene of pupils outside the school and the hygiene of teachers. Noteworthy here were several papers on the subject of home work, and papers relating to the hygiene of teaching by Wichmann and others; and also such questions as smoking and the use of alcohol were discussed. Here, as in all the departments, perhaps, almost every paper deserves mention. Those noted above are samples.

Sir Lauder Brunton, of London, was elected president of the next Congress, which is to be held in London in 1907.

WM. H. BURNHAM.

Personal and Ideal Elements in Education, By HENRY CHURCHILL KING. The Macmillan Co., New York, 1904. pp. 277.

The author here brings together in an interesting and stimulating way the results of his own educational studies. His chief topics are

the primacy of the person in college education, the fundamental nature of religion, religious training as conditioned by modern psychology and pedagogy, the revival, its dangers, needs, how to make a rational fight for character. On the whole it is a fresh stimulating book to which no brief review can do adequate justice.

Story of the Bible told for Young and Old, by REV. JESSE LYMAN HURLBUT. J. C. Winston Co., 1904. 168 stories. pp. 750.

This volume is the most interesting and attractive collection of Bible stories known to the reviewer. The selections are made with great care and discretion. The picture illustrations are many and also well chosen, and besides meeting the great and growing need of the Bible content put in simple form for Sunday School and home, it is positively interesting reading for the natural man. This is saying much in these days when the youth of our land are in a state of progressive ignorance of the Bible and where in many public and in some Sunday schools the stories of the Grail and other Wagner themes are more familiar than those of Scripture.

The Color Line. A Brief in Behalf of the Unborn. By WILLIAM BENJAMIN SMITH. McClure, Phillips & Co., New York, 1905. pp. 261.

Education is clearly not a cure for the ills of the negro question. The coddling of the North has not effaced a single racial trait nor raised by one notch the average character of the best part of the race who have been most exposed to it. Criminality, according to these statistics, has increased. The black race is too inferior to receive our civilization, and it can only be imposed upon them from without. The negroid inferiority, which fills a chapter, is argued at length. The awful danger of contamination with negro blood must be avoided at all hazards. Mongrelism would mark the twilight of the nation for there is enough negro blood here to sink our race. The lower race always dies out in the end and this will be the case. The negro will disappear by natural causes.

The Fourth Yearbook of the National Society for the Scientific Study of Education. Edited by Manfield J. Holmes. Part I. The Education and Training of Secondary Teachers, by E. C. Elliot, E. G. Dexter, M. J. Holmes, and others. University of Chicago Press, Chicago, 1905. pp. 117.

The various chapters of this little book describe first the genesis of the secondary schools and their relation to the life of the people, the ideal secondary teacher, the present status and personnel of the secondary teaching force in this country, provisions for their training, and the relative advantages and limitations of universities and normal schools in preparing secondary teachers. The latter problem is a vital one and in many opinions quoted there is much unanimity on the part of college teachers that they can do best for the secondary teacher, but in general this form of education is at present unsatisfactory.

Feuerbestattung? oder Erdbegräbnis? Wie sollen wir unsere Toten bestatten? (T. Voelkel, Ph. D.) Feuerbestattungs-Verein der Vereinigten Staaten von Amerika, 1904. Chas. H. Schaller, Prin-.ter, Brooklyn. pp. 30.

This interesting little pamphlet sums up the arguments in favor of cremation, gives the addresses of forty-two secretaries or heads of cremation institutes in different lands, prints another list of the more important crematories in the order in which they were developed, the

first two being in Milan and in Washington, Pa., in 1876. From 1887 to 1897 they increased in number more than they had before or since. The physiological and economic arguments are set forth with great detail and the sentimental aspect of the subject is also treated with seriousness.

Pedagogues and Parents, by ELLA CALISTA WILSON. Henry Holt & Co., New York, 1904. pp. 290.

This book is addressed to parents and is a comment on present education methods and situations for their benefit. The writer has great scorn for the ordinary current pedagogy and has certainly written a vivacious book. She can hardly be said to have a very definite doctrine. She dislikes Brahminical Boston because childhood needs enthusiasm, is a great admirer, however, of Colonel Parker and the Quincy method. The N. E. A., which has predicted great change and improvement, has not yet seen its splendid visions realized. Uniformity of President Eliot and the diversity of Professor Search are contrasted in favor of the latter. Individuality is perhaps the author's fondest word, and schools jeopardize this. Large things, letters, objects, topics, and not little ones is what we want. The author finds great fault with the teaching of arithmetic and morality which ought to be the end of all, and realizes that the school is for the sake of the child and not *vice versa*.

Education of the Wage-Earners, by THOMAS DAVIDSON. Edited with introductory chapter by Charles M. Blakewell. Ginn & Co., Boston, 1904. pp. 247.

This is a charming volume describing the work of the philosopher and philologist, Thomas Davidson, on the east side of New York among the lowly and often rather ignorant working people. Here he inaugurated and directed up to the time of his death, in September, 1900, a unique and it would appear experimental work, and showed that a philosopher of his somewhat transcendent type could be very practical.

The Distribution of Wealth, by THOMAS NIXON CARVER. The Macmillan Co., New York, 1904. pp. 290.

Economics as the study of man's actions in the ordinary business of life, viz., getting a living, is a topic of perennial and now very rapidly growing interest. The seven chapters that constitute this work are devoted to some of its cardinal themes, viz., value, diminishing returns, the forms of wealth, income, wages, rent, interest, and profits.

A Short History of England, by EDWARD P. CHEYNEY. Ginn & Co., Boston, 1904. pp. 695.

In this attractive book the story of England is told with copious illustrations from prehistoric times down to the death of Queen Victoria. Abundant maps, and many cuts of portraits, notable scenes, buildings, etc., are found.

The Tenth Annual Report of the British Child-Study Association. London Branch. 1904–05. Wm. Newbold, London, 1904. pp. 16.

We congratulate the members of this association on the remarkable progress not only in numbers but in the quality of their membership. In the energy and effectiveness of the organization those interested in this subject on this side of the Atlantic have very much to learn from what has been done here.

Elements of Botany, by JOSEPH Y. BERGEN. Revised Edition. Ginn & Co., Boston, 1904. pp. 283.

Bergen's Botany has long been one of the standard introductory

text books to the subject. It has here been revised and somewhat amplified.

The Teaching of Biology in the Secondary School, by FRANCIS E. LLOYD and MAURICE A. BIGELOW. (American Teachers' Series.) Longmans, Green & Co., New York, 1904. pp. 491.

The first part of this book is devoted to the pedagogy of botany in secondary education and discusses the principles determining the content of such a course, its various types, use of method, the laboratory, literature, etc. The second part treats zoölogy, including human physiology, in a somewhat similar way. As a whole the work is much stronger in method than matter and to our thinking the discussions are tedious and abstract. There are methods of teaching which deaden the interest of the pupil. There are normal methods that are calculated to deaden that of the teacher. Hyper-methodism to our thinking pervades the whole book. There are many references to books by title to which nothing in the text has any apparent relation.

Our Schools: Their Administration and Supervision, by WILLIAM ESTABROOK CHANCELLOR. D. C. Heath & Co., Boston, 1904. pp. 434.

The author has had excellent experience as a superintendent and has laid to heart the lessons of experience as well as those of literature. The chief topics treated are the school system, the board of education, administration by board, superintendent and principal, the functions of each of these three, supervision, the graded public school, the state system, the district, and the private school, the class teacher, the new educational course of study, the educational policy of the community, getting into office, salary, tenure, certificate, ages in the grades, etc. There are many valuable appendixes covering some fifty pages and no less than fifty important practical topics are briefly treated.

Moral Education, by EDWARD HOWARD GRIGGS. B. W. Huebsch, New York, 1904. pp. 330.

This is, we believe, the third, and it is certainly the best, of the volumes of this delightful lecturer. The topics here included are many, chief among which are the child, world, unity of life, and uniqueness of each person, growth, moral evolution and culture, types of character, and activity, moral training, work, play, environment, art, nature, social atmosphere, the principles of government in home and school, applied democracy, corrective discipline, personal influence, especially parents and teachers, and teaching ethics directly and by example, also history, mythology, folk-lore, literature, the relations of moral to religious education. A valuable descriptive bibliography of some twenty-five pages is appended.

Little Folks of Many Lands, by LULU MAUDE CHANCE. Ginn & Co., Boston, 1904. pp. 111.

This is another little and rather modest effort to introduce rudimentary anthropology into the schools. We have here a chapter each on an Indian, Holland, Philippine and Japanese girl, and upon an Eskimo, an African, and Arabian boy. The illustrations are copious although to our mind many of them might have been somewhat better chosen.

Famous Men of Greece, pp. 265; *Famous Men of Rome*, pp. 269; *Famous Men of the Midle Ages*, pp. 272; by JOHN H. HAAREN and A. B. POLAND. University Publishing Co., Boston, 1904.

This little series is a very attractive one both in form and content. It is based upon the sound idea that biography is the best form in pre-

senting history to children. The type is large and plain, the paper and binding excellent. All are illustrated by many very well chosen cuts. While all are excellent we are inclined to give the palm to the third book in the series on the Famous Men of the Middle Ages.

Out of the Northland. Stories from the Northern Myths. By EMILIE KIP BAKER. The Macmillan Co., New York, 1904. pp. 165.

This is a capital little book, small, inexpensive, concise, and gives the story root of the whole Norse mythology, often called the German Bible. It is something which every child should almost know by heart.

Sir Thomas Moore's Utopia. Edited, with introduction and notes, by J. Churton Collins. Clarendon Press, Oxford, 1904. pp. 283.

Moore's Utopia ranks in celebrity with "Pilgrim's Progress," "Robinson Crusoe," and "Gulliver." It is closely bound up with the personal life of its author and with the social and political movements of his day. The text is from the first edition, the antique spelling of which makes it a little confusing to read. The notes, however, and the glossary, covering 128 pages, abundantly make up for this. An introduction, too, of 50 pages, gives the life of its author, the framework, model, plot, and purpose, together with the origin and inspiration of the Utopia.

How to Keep Well, by ALBERT F. BLAISDELL. Ginn & Co., Boston, 1904. Revised Edition. pp. 265.

This little primer of practical physiology, which is here thoroughly revised, will no doubt seem to some coarse and its dogmas too schematic, etc. Nevertheless, we believe it has a place as a primer.

Elements of Plane Geometry, by CHARLES N. SCHMALL and SAMUEL M. SHACK. D. Van Nostrand Co., New York, 1904. pp. 233.

This book seeks to present the elements of plane geometry in a compact form commensurate with recent progress in the subject. Special attention is given to brevity, simplicity, grading, absence of ambiguity, terms, proofs stated so that they cannot be memorized, interlocking relations between the problems, etc.

Eighteenth Annual Report of the Commissioner of Labor, 1903. Cost of Living and Retail Prices of Food. Government Printing Office, Washington, 1904. pp. 865.

The Adventures of Pinocchio, by C. COLLODI. Translated by Walter S. Cramp. Ginn & Co., Boston, 1904. pp. 212.

Goethes Hermann und Dorothea. Edited by Philip Schuyler Allen. Ginn & Co., Boston, 1904. pp. 257.

Elementary Woodworking, by EDWIN W. FOSTER. Ginn & Co., Boston, 1903. pp. 133.

Grammar School Arithmetic, by DAVID EUGENE SMITH. Ginn & Co., Boston, 1904. pp. 394.

The Function of the Department of Education in Southern Universities, by EDWARD F. BUCHNER. Hackney & Moale Co., Ashville, N. C., pp. 12.

The Sonnets of Shakespeare, with an introduction and notes, by H. C. BEECHING. Ginn & Co., Boston, 1904. pp. 145.

Ideals and Practice in a University. A Pedagogical Experiment, by HARLOW GALE. The "Vineyard Press," Minneapolis, Minn. pp. 61.

Flachsmann als Erzieher. A Comedy. By OTTO ERNST. Edited with notes and vocabulary by Elizabeth Kingsbury. Ginn & Co., Boston, 1904. pp. 190.

Der zerbrochene Krug, von HEINRICH ZSCHOKKE. With introduction, notes and vocabulary by Herbert Charles Sanborn. Ginn & Co., Boston, 1904. pp. xvi + 76.

The School of the Heart, by MARGARET FLETCHER. Longmans, Green & Co., New York, 1904. pp. 109.

La Mère de la Marquise et La Fille du Chanoine, par EDMOND ABOUT. Edited with notes and vocabulary by O. B. Super. Ginn & Co., Boston, 1904. pp. 227.

Elements of the Differential and Integral Calculus, by WILLIAM ANTHONY GRANVILLE, with co-operation of Percey F. Smith. Ginn & Co., Boston, 1904. pp. 463.

Excursions and Lessons in Home Geography, by CHARLES A. McMURRY. Macmillan Co., New York, 1904. pp. 152.

A First Book of Algebra, by JOHN W. HOPKINS and P. H. UNDERWOOD. The Macmillan Co., New York, 1904. pp. 245.

Graded Art Readers. Book Two. By ELLEN M. CYR. Ginn & Co., Boston, 1904. pp. 136.

Earth and Sky, by J. H. STICKNEY. Number I, 1904, pp. 115. Number II, 1903, pp. 118. Number III, 1904, pp. 160. (Study and Story Nature Series.) Ginn & Co., Boston.

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INTERNATIONAL CONGRESS OF CHILDHOOD AT LIÈGE.

In connection with the international exposition to be held at Liège, Belgium, from April to November, during the coming year, it is proposed to hold an International Congress of Childhood, from September 17 to 20 inclusive. The purpose of the congress is to consider the best means of promoting the physical, intellectual, and moral development of the young in the home, the school and society.

The congress will be organized in four sections, as follows: (1) Education of Children; (2) Study of Children; (3) Care and Training of Abnormal Children; (4) Parents' Associations, Mothers' Clubs and Other Supplementary Agencies for the Improvement of Youth. Membership in the congress is solicited from educational institutions and associations, societies for the protection and guardianship of youth, students of the psychology of childhood, teachers, philanthropists, and parents. The membership fee (ten francs) may be sent direct to the secretary of the congress, Louis Pien, No. 44 Rue Rubens, Brussels, Belgium, or to any member of the American committee.

To promote an interest in the Liège International Congress in the United States, the commissioner of education has appointed the following American committee:

Chairman, Prof. M. V. O'Shea, University of Wisconsin, Madison, Wis.; secretary, Prof. Will S. Monroe, State Normal School, Westfield, Mass.; the Hon. Alfred Bayliss, State superintendent of public instruction, Springfield, Ill.; Miss Ellen M. Henrotin, Chicago, Ill.; Prof. A. Caswell Ellis, University of Texas, Austin, Tex.; the Hon. Richard S. Tuthill, Chicago, Ill; Prof. William H. Burnham, Clark University, Worcester, Mass.; Mr. Charles W. Birtwell, Children's Aid Society, Boston, Mass.; and President E. G. Lancaster, Olivet College, Olivet, Mich.

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A STUDY OF CHILDREN'S INTEREST IN FLOWERS.[1]

By ALICE THAYER.

SECTION A.

This part of the study is based upon 433 returns from children ranging in age from eight to twelve years,—219 are from girls, 214 from boys. 300 of the returns are from children living in a very small city. 133 are from those living in a large city.

Flowers Known by Children. 177 different flowers were mentioned as known by the children; the average number of flowers known by a child according to these returns, is 15; with children, eight years old, the average is 14, nine years, 17, up to twelve years where the average is 21. The flowers mentioned in the largest number of papers were the rose, violet and pansy. More flowers are mentioned by the girls than by the boys,

This study was made with aid from the Carnegie Institution.

[1]This study is based upon material collected in answer to a syllabus issued in November, 1902. The questionnaire is in two parts: the first part comprising a set of questions to be answered directly by the children themselves; the second part intended to bring out replies more of a reminiscent nature from youth and adults.

Acknowledgments for data are due Miss Lillie A. Williams, State Normal School, Trenton, N. J.; L. W. Kline, State Normal School, Duluth, Minn.; W. S. Monroe, State Normal School, Westfield, Mass.; Normal Schools of Emporia, Kan., Mankato, Minn., Greeley, Col., Fitchburg, Mass.; Miss Calkins, Wellesley College; T. H. Hadley, Superintendent Public Schools, Sharon, Pa.; J. E. Lynch, Principal in Public Schools, Worcester, Mass.; J. C. Wagner, Principal Public Schools, Newport, Pa.; Miss McCorkle, Public Schools, Philadelphia, Pa.

The writer wishes especially to express grateful thanks to President Hall and Dr. Theodate L. Smith for their kindness and helpful suggestions.

also a larger number by the children of the large city than by the others. The children who especially stated that they had lived in the country seemed not to know any more flowers, either wild or cultivated, than the others, and in almost all cases, not as many as those who stated that they had never lived in the country. In very many cases, the fact was not stated whether the writer had ever lived in the country or not, but the difference in the size of the localities from which the returns come may perhaps suggest some comparison in this respect. The cultivated flowers are mentioned in much larger numbers than the wild flowers, and as the number of flowers known and mentioned along up the ages increases, this increase seems to be, in the whole number of returns, in the cultivated flowers, but in the 133 papers, this gain is also in the wild flowers. With the children living in the large city, the average number of wild and cultivated flowers known is nearly the same, while with the other children the proportion of wild and cultivated is about half. The fact that the the children who have lived always in a large city know more of the wild flowers, immediately suggests an effect of the growing interest in nature study and the part it plays in the school work in stimulating in the child a closer acquaintance and wider knowledge of the flowers in the community. Special likes and dislikes are indicated in the majority of the returns, most having one favorite flower and about three-fifths of the total number answering, mentioning flowers disliked.

The favorite flowers, according to frequency of mention, are largely the cultivated ones,—rose, carnation, lily, lily of the valley, and violet. In some cases one reason is given for the flowers being the favorite, and in some, several reasons, the numbers following referring to any one reason expressed or among several. The reasons given for the likes are most commonly (1) fragrance (64% giving this as a reason for the special preference); (2) beauty, because the flower is pretty, (31%); color is specified particularly in 15% of the cases, blue, white, and the many colored flowers like the pansy, sweet-pea and tulip being the special favorites where color is concerned. There was no instance of a yellow flower being mentioned as a favorite on account of its color, and there were but very few cases where yellow flowers were given as the favorites for any reason, while it is very noticeable in the dislikes that it is largely yellow flowers that are specified. (3) Miscellaneous reasons, on account of the shape, size, certain qualities possessed by the flowers, the lasting nature of certain flowers giving them the special preference with several, from certain attributes which the flowers embody, with a few, and through certain associations. Thirty-five different flowers are mentioned for the vari-

ous reasons, showing the wide range of individual preferences. Of the concrete preferences under this latter heading were the following :

Several times mentioned for the shape or form, were the lily, lily of the valley, because it looks so much like a bell (F., 8); because it is so graceful (F., 12); the sweet pea, because it is shaped so oddly (F., 9); one's favorites are the pansies, because they have such soft, velvety petals (F., 11); calla, because it looks so rare and like wax (F., 12); carnation, because it stays in bloom pretty long and because it was McKinley's favorite flower (M., 11); the purity of the lily and the calla is several times mentioned; also the violet because it is so innocent (M., 12); so neat (F., 10); pansy, because it is so dainty (F., 9).

The flowers disliked are largely the wild flowers : dandelion, daisy, buttercup, sunflower, goldenrod (noticeably yellow flowers), being most frequently mentioned. Sixty different flowers are mentioned among the returns as individually disliked, wild and cultivated flowers being mentioned in the same proportion. The reasons for the dislikes are practically co-ordinate with those for the favorite flowers; (1) odor of the flower, (47% specified this reason); lack of odor is also given as a reason for disliking the flower in some cases (10%); (2) lack of beauty because the flowers are not pretty (11%); the color of the flower is specified particularly in 8% of the cases, yellow and red being the colors especially disliked; (3) miscellaneous reasons, shape, size, disagreeable qualities of the flower, perishable nature, etc. As showing the many individual dislikes, the following are typical:

Bleeding hearts, because they have no smell and are not pretty (M., 10); the red rose, on account of its color (M., 9); pink, buttercup and daisy, because they don't smell good and are not a good color (M., 10); hyacinths, because they are not pretty and have a sickening odor (F., 12); tulip and daisy, because they are not a pretty shape and don't smell nice (M., 11); dandelion, because it stains your hands (F., 9); daisy and buttercup, because they are so common (M., 12).

Certain noticeable differences between the girls and boys are brought out in the reasons given for both the likes and dislikes. In both *fragrance* leads as the reason with the girls over the boys in a larger proportion by 10%, the number of returns from boys being slightly larger in each case, also; this fact seeming to suggest that there is perhaps greater sensitiveness to odors with girls than with boys. In the dislikes, the second reason, as the first is less intense, leads with the boys over the girls. In the likes, the shape or form of the flower, and the qualities that the flowers seem to possess, because it is "delicate," "pure," "neat," etc., lead as reasons with the girls over the boys, while the older children, as we should expect, mention these reasons particularly more than those younger.

More than four-fifths of the children answering the syllabus

ascribe feelings in one way or another to the flowers. In many cases it is taken for granted that in a general way, flowers are like people in possessing a sentient life, some of the individual expressions being that "they have as much feeling as we do" (M., 9); "feelings as well as people" (M., 10); "just like anyone else" (F., 9); "just the same as a person, and if a flower could talk it would tell us many a sad thing" (F., 9); "they are like people because they have feelings" (F., 8); with some, and these mostly among the older children, the belief is somewhat modified, the expressions of it being that 'flowers have some kind of feeling,' or 'feelings in one way,' 'to a certain extent', or 'some do.' In some cases, the original *feeling* upon which the belief might rest, seems to exist, but it cannot be quite accepted as such; one says "I like to think they do, anyway" (F., 12); "I hate to see them harmed or destroyed, because it makes me feel as if they had feelings and were suffering" (M., 11). The feelings ascribed to them, in many cases, seem to be largely physical; the fact that they live and grow and die, and their responsiveness to various conditions indicating that they possess sensations. Their wilting and dying when they are handled, picked or ill-treated are commonly taken as signs that they must feel; also their need of water, their withering for want of moisture, their turning toward the light. More definite physical feelings are given them in the children's saying that under various conditions the flowers feel good, nice, healthy, fresh, like living, warm and cozy; and in the feelings of discomfort which they attribute to them, cold, frozen, feel like dying, feel dead, bad, miserable, sleepy, 'they go to sleep when they wither,' drowsy, tired, sick, thirsty, hungry.

The strength of this idea that the plant or flower must suffer pain or discomfort when ill-treated in any way, as a person would, is shown by the often intense feeling about it on the child's part. Some of the expressions of this feeling for flowers would attribute to them feelings beyond merely physical suffering. Children themselves feel sorry, sad, angry and like crying; it is thought to be cruel, sinful and wrong to harm or abuse flowers. They would not like to be flowers on account of the ill-treatment and suffering undergone by them, and the short life that they have. Some few do not even like to pick flowers and especially to throw them away afterwards or to use them in their plays on account of this feeling for them.

It is felt to be 'just as much harm to abuse them as it is to abuse a person' (M., 11); it is wicked to abuse them, and it makes my heart ache, when I see them tramped down (F., 10); the people that do it ought to be punished, for flowers have as much right to live in the world as we (M., 10); it is a sin to tramp them down and pluck them off their stems, for God made them to live on earth as we do; he also

wishes us to love them, (M., 9); one often thinks 'it is cruel to throw away a flower, or when you are picking them to leave a small one away from the rest' (M., 10).

Feelings in the higher sense of mental attributes are very many times given them; children say, that in the spring time, the flowers feel happy, good, glad,—"glad because it is warm and they can have water enough to grow" (M., 9); "glad to come out from their houses under the snow" (F., 11); and "to come out to bloom" (F., 10); gay, bright, merry, pleasant, free, delighted, "tickled when spring comes" (F., 10); "anxious to grow" (M., 12); "nice and cozy when it is warm" (F., 11); "they feel like dancing and singing" (M., 9); "like growing and being beautiful" (M., 12); "they like it in summer" (M., 12); when it is cold they feel sad, sorry, unhappy, lonely, melancholy and "like crying," "they give up all hopes of living" (M., 11); "they hate the fall for Jack Frost comes" (F., 11); "they don't like it because they would like to be with us always" (F., 11).

F., 9. I think flowers feel fresh and gay in the spring time and say to themselves—"How lovely it is, I am glad I am a flower," but when the trees are losing their leaves, they commence to shiver and shake with the cold and they say "oh how cold." When winter comes they are covered over with their blanket of leaves and quilt of snow.

M., 12. Flowers are happy in the spring because they seem to look so happy, and when you pass them they seem to nod their heads as much as to say, "How do you do," while in the fall they feel sad and melancholy.

F., 8. The flowers wake up in the spring time and feel happy, but in the fall they begin to get sleepy, and then they go to sleep.

A few of the scattered expressions show also a more or less intense animism:

Flowers are like people because they can think (M., 9); one thinks 'flowers act like people' (M., 10); they like to have pretty dresses just as people do (M., 11); one cannot name any one favorite flower 'because she feels that the other flowers will feel jealous' (F., 10).

Flowers are further endowed with moral traits by a small percentage of the children, most largely the girls, as previously in the section on the favorite flowers we saw these attributes in some cases applied to them. They would like to resemble flowers in these ways, and they are looked upon as "sweet and pure," the violet is "modest and sweet," or "humble;" the carnation is "cheerful," "pure." The lily is "so pure and beautiful," one 'would be like the rose because it makes people happy' (F., 9); one "would be like a flower in some ways, and if I tried I could be as good as a flower is" (F., 11); the dogwood is disliked 'because it looks so impudent' (F., 11).

Children think the flowers talk in a third of the returns, here also a slightly larger percentage of the girls. Some interpret their nodding, bending, and blowing with the wind as

flower language. In one or two cases, the children fancy that the flowers seem to talk to them, but the usual fancy is that in their own way, and in a language of their own, they do talk to each other. Some of the children's expressions of this belief are as follows:

I think every flower talks (M., 10); flowers talk to one another, but the talking they do cannot be heard (M., 11); flowers talk in a language as we do in our language (M., 11); I think the flowers have a way of talking to each other (F., 10); I believe when flowers swing that is their talk (F., 10); I believe flowers talk in their own language because I have seen lots of flowers bend toward each other (F., 12); I don't believe they talk, but they nod their heads when they see each other (M., 10); when people pick them they talk I think (F., 9); some flowers seem to talk and others are very pleasant; often when I go home to dinner, and generally when I eat by myself, and flowers are on the table, they seem to talk to me and keep me company (M., 12).

These fancies in general seem to show practically no decrease in frequency or intensity in the case of children between these ages, there being rather, if anything, an increase in both respects up along these years, one reason, doubtless, being that the children a little older can better express their feelings or fancies. An additional collection of returns, however, from 113 children, thirteen, fourteen and fifteen years old, seems to show a noticeable change in regard to a present belief that the flowers have feelings or that they talk; so that it seems reasonable to say that much beyond twelve years, on the average, the animism is less strong. With regard to sex distinctions; a difference between girls and boys is noticeable throughout, a larger percentage of the girls affirming these fancies, the negatives occurring more among the boys. The fancies seem about equal regarding quality and intensity. Concerning outside suggestion, nature study, literature given in school and stories or poems early heard or read, have doubtless more or less influence upon these reactions toward flowers. In regard to any influence from the first source it was noticeable that the children who have lived always in the large city exhibited these thoughts and feelings about flowers in their answers even more frequently than did the others. Any comparison in these returns is hardly warrantable, but an effect which nature study may quite probably have, may be suggested, that the learning something of the structure and habits of plants and flowers and the close acquaintance with them, may have the effect of humanizing them to some extent to the child, causing him to think of them more on an equality with human and animal life and to treat them more feelingly, fitting in with the way his imagination tends to regard them. Stories and poems heard or read at home or in school must have some share of suggestion, though they may not be definitely traced here as in the remi-

niscent fancies of the adults, they are in many cases readily and specifically acknowledged. But even if the notions of the flowers talking together and of their being capable of mental feelings and emotions, as well as of physical suffering were originally suggested or helped on from outside sources, still the fact that they are so readily assimilated and unconsciously incorporated and accepted, as has been pointed out in other studies, gives such fancies claim to individuality.

Children think that flowers are made for "their beauty," this reason most largely given, "to make the earth look pretty," "to help make the world beautiful," etc.; also, and these reasons expressed more largely and particularly with the girls, as is also their beauty, for the happiness, pleasure and cheer which they give, "to love," "to make children happy," "to make the world better," "for gladness," "to make the world and people more cheerful," "to take to sick people to make them happier and stronger." With some their fragrance is their dominant appeal, and with others in answering this question their decorative uses and associations with the dead are immediately suggested.

Flower Customs of Children. Flowers are very largely used by children in their plays and games, and many things are enumerated as made with them; about three-fourths of the returns indicating such uses. Many articles of adornment and ornaments are made by using flowers, wreaths and bouquets of various flowers, chains of dandelion stems and daisies, crowns of daisies, honeysuckle, and leaves, necklaces, bracelets, rings, earrings, trimming hats with flowers and making hats of large leaves trimmed with blossoms, dandelion curls, braiding hair with violet stems, bracelets of burrs, grasses and thistles, crosses; playthings are made in great variety, flower dolls, and 'making believe they are dolls, and dressing them up in other flowers,' dolls' hats, dresses, parasols, umbrellas, fans, dishes, cups and saucers; furniture, chairs, beds and cradles, playhouses, make-believe people, soldiers, animals, pocket books, boats from bleeding hearts, whistles, balls, for decorating the play-house, for make-believe articles in playing store, money from dandelion blossoms. The girls in a considerably larger percentage use flowers in these ways than do the boys. The variety of these usages of flowers is also much greater among them; they are used in more ways as playthings, naturally as dolls and as things for the play-house, while the matter of dress and decoration comes out much more strongly with the girls both in the number of uses and in the frequency and elaboration with which they are mentioned.

Flower-Lore of Children. The amount of flower-lore in the way of superstitions connected with flowers seems not to be

very large among these children. Most commonly known was holding a buttercup under the chin to see if one likes butter; the large proportion also and this more noticeably among the younger children and the girls asserting their belief in the truth of the saying. Less than one-tenth of all the children gave instances of other lore concerning flowers and these in most cases were given by the girls. Dandelion lore instanced was the following: blowing the fluffy head after the flower has gone to seed, 'to see if your mother wants you,' or to tell the time of day; putting the dandelion under the chin 'to see if you like butter.' Daisy lore; pulling off the petals, to tell fortunes, saying, "He loves me," "He loves me not," or repeating, "One I love," "Two I love," etc., 'to tell if your father or mother loves you best,' naming the petals and pulling them off 'to see which would be your friend;' pulling apart the yellow centre and blowing it from the hand 'to tell the number of children you will have;' pulling the daisy apart, and if the flower falls out it is time for dinner. Tickling the chin with a buttercup, if the boy laughs it is a sign he likes the girls, and *vice versa;* finding four-leaved clover for good luck.

Section B.

The returns considered in this section are reminiscent, and comprise 352 papers. Of these 239 are from pupils of the Normal School ranging in ages from eighteen to twenty-two, with some few younger and older; 189 are from young women, 50 from young men. The remaining 113 are from girls and boys of the eighth and ninth grades, from thirteen to fifteen years old, 52 from girls, 61 from boys. There are only a very few papers that are absolutely negative regarding flower fancies. In all, there were 25 adults who did not answer at all any of the questions relating to fancies about flowers, 20 among the young men, 5 among the young women.

The fancies in this section seem to classify themselves under the general headings of those of *outer* and *inner* resemblances.

Points of external resemblance largely human, some animal, some resemblances to flame, blood, sunlight, etc., through color suggestions are noted in the majority of the returns. Human faces or features are specified as seen in the large majority, about two-thirds of all the papers recording this fancy. The pansy is particularly suggestive in this way, with nearly the same number. Besides the mere external resemblance to the whole face or different features in particular in the spots and markings there is in many cases an animistic touch added; the fancied resemblance is extended to the idea that there is personality and intelligence back of the human appear-

ance and because of it. In the pansy are seen resemblances to friends; one used to name the different pansies in her mother's garden for the different people she thought they resembled (F., 20), innocent baby faces, children's faces, features of a fair lady, faces that are attractive, smiling, sunny, some seeming to laugh, others to cry, sad, sweet, saucy, innocent, mischievous, piquant, bright, cute and sly, cunning, jolly, grave, modest, thoughtful looking, 'as if they could speak;' "a pansy looks very much like a face, and as if we were going to speak to it, and it was listening very intelligently" (F., 14); one always thought a row of small pansies had features, and that they watched her, so she was always careful what she did before them, and if she ever pulled or destroyed flowers in their sight, they seemed to bend their heads and whisper together (F., 19); pansies are little children turning their little faces up with a smile and expecting one in return (F., 23); to one the pansy always seemed more like a human being than any other flower, and she wanted to resemble it, it had such a sweet face and seemed so sweet (F., 19). Pansies are little dwarfs, 'are always thought of as having eyes, nose, mouth, and a small hood.' The violet also suggests human features to a smaller number; one has seen features in the violet when it seemed as if it were hiding so it would not be picked (M., 15). Also the daisy; one always imagined she saw faces in the daisies; some resemble old persons, others young, some smiling, some frowning (F., 19); it always suggests a round, rosy-faced child (F); daisies and sunflowers look like bright, little faces (F). Other special flowers are noted in one or two instances each as suggestive of this similarity.

Blue bells are just little heads nodding on slender necks; the centre of the daisy is an eye and the petals, the eye-lashes; grass flowers are just little eyes; the forget-me-not has eyes; nasturtiums have faces and eyes; red phlox with bright centres suggest bright eyes; the black-eyed susan is an eye; the larkspur, morning glories and tulips are mouths; the snap-dragon has a large mouth and small eyes; the snap-dragons have mouths and tongues. Several are even more fanciful:

F., 16. In all flowers I have a feeling that there are faces. I always think of the pretty dainty petals as gowns and bonnets, and I imagine that the little faces peep shyly out from them, or else hide there demurely.

F., 20. To me a rose seemed most human. As a child I could readily transform a full-blown rose into the face of a lady, and that of a bud into a little child. I thought of their green leaves as green dresses, and the thorns as pins in their dresses.

F. Often thought that flowers had faces and that the bright pink roses were little girls' sunbonnets, and the yellow stamens, their curls.

The form or arrangement of the parts of the blossoms in some cases suggests persons; one always thought of the seed-pod in a pansy blossom as a little old lady in an old-fash-

ioned dress (F., 22); the inside of a violet looks like a man sitting in a chair with his feet in a tub (F., 15); in a violet one always sees a queen seated on her throne, encircled with beautiful purple (F., 20); one always made wonderful stories about the little woman in the violet for she really seemed human to her (F., 22); the minister in his pulpit in Jack-in-the-pulpit, or a man who looks as if he were hiding in a well (M., 15). One always thought of the parts of a flower as corresponding to parts of the human body—calyx, the head; the corolla, the face; the pistils and stamens, the eyes; the stem, the body; the leaves, the arms, and the roots, the feet of the flower.

Some have seen animal resemblances, though these fancies are not so numerous. Many of the ideas are not independent and individual fancies suggested by the appearance of the flower, but are clearly suggested solely or largely by the name,—adder's tongue suggesting an animal, tiger lily, a leopard or a tiger's skin, coxcomb, the mutilated comb of a rooster who has been fighting, etc. Some of the suggestions are more remote called up by the qualities of the plant, the burr suggesting the porcupine, also the sharp stiff bearded wild grass. The common fancied resemblances are the following:

Touch-me-nots suggest birds just ready to fly, a bull dog, a lion's mouth, "used to make me think of frogs and I used to gather them and make them open and shut their mouths" (F.); they always seemed ready to swallow one (F. 17). To several, pansies have suggested cat's faces, dogs or monkeys, and those with short fat stems compared to animals with short stumpy tails (F. 17). The bleeding heart has suggested rabbits; cottonwood blossoms, huge worms; a certain kind of ivy that looks as if it were crawling, always called the snake (F.); cactus, snakes, looks like a lion, chrysanthemums, little spaniel dogs; columbine, birds just ready to fly; the honeysuckle looks like a humming bird; lady's slipper, a bird, to one, a duck; milkweed pods, sparrows; nasturtium, a monkey's face; some orchids, birds or beautiful butterflies; sweet pea, a very beautiful bird, and to one, rabbits; tiger lily, a frog, a gayly colored butterfly, the red bird; "many flowers seem to be dainty birds that have alighted on flowers" (F. 19).

There are further suggestions from the color of the flowers: brightly colored red or orange flowers suggest flame and fire, red flowers, blood, and many times, yellow flowers, sunlight. "A carnation seems like the last spark of a wood fire" (F. 14); "red geraniums seem dyed in blood," 'red maple plants look flamed with blood,' poppies always suggest to one war and blood from a description once read of a battlefield where the poppies were splashed with blood; golden glow and dandelions seem like patches of sunshine, yellow nasturtiums like bursts of sunlight.

The rest of the fancies expressed in regard to flowers and the larger number of them seem to be included under the heading of *Inner Resemblances*. In this section the an-

imism comes out strongly in the personification of them in the way of mental attributes and in the feelings expressed for them.

A great many human attributes are ascribed to flowers in the way of moral qualities, over one hundred and fifty different attributes being applied to them. Some have especially likened flowers to certain people or friends, thinking of them as possessing human personal characteristics and attributes like them, a few even naming them for people where these inner likenesses seemed strong.

The qualities are suggested by the appearance of the flower, its size, color or manner of growth, also by the odor, and, with one or two, by the taste. The strength of the personification of them in these respects exists in varying degrees from merely expressing something of the outward appearance in terms of mental traits to greater elaboration of individual fancy. In general the tall growing flowers are attributed with feelings of pride, haughtiness, disdain, rudeness, selfishness, unfriendliness, etc.; the small ones are loving, sweet, modest, etc. Brightly colored and showy flowers are, similarly, bold, eager, selfish, and those more delicate in color, modest, pure, gentle, sweet, unassuming, etc. Bright flowers are also quite commonly cheerful and sociable as are those which grow closely together, in clusters or many of a kind together. Those with sweet odors are mostly of sweet disposition, gentle, tender, social, etc.; those of strong or offensive fragrance, disagreeable, ugly, spiteful, etc. Many of the suggestions are *place* associations—in the case of the flowers that seem solitary, lonely, shy and retiring. A few instances of these fancies about flowers in general, show the character of the returns.

F., 16. I cannot help associating different characters with the different flowers, and I cannot help thinking that they also have their likes and dislikes; some seem to be so simple and yet so beautiful and others are gaudy and brilliantly colored. With the latter ones I always connect the characteristic of disdain; they always seem to lift their heads a little higher than their more humble companions, and seem almost to say "I am better than you."

F., 18. Their dispositions seem to vary with their size and color. The little delicately tinted ones are sweet and modest, unassuming, cheerful and kind-hearted. If they are brightly colored they are apt to be sarcastic, selfish, etc., on the surface, with their kindness and loving traits to be found after search. Large delicately tinted flowers seem to be affected. They pretend to be what the little ones are and yet always try to thrust their goodness before one. The large bright ones are bold, careless and eager, apt to be impulsive, and confident of their own power and importance.

F., 21. Flowers have different dispositions, some are coarse and selfish, others are tender and sweet. The tall rank flowers, especially those that were not sweet scented, always seemed to me to be a little overbearing or ill tempered, while the sweet scented flowers were gentle and good natured.

The suggestiveness of the different flowers in this respect, is interesting, some special flowers embodying so many and such a variety of inner qualities and traits, yet with certain attributes applied predominantly to certain flowers.

The *rose* is to most proud (22); "the rose seemed to look down scornfully on other flowers which grew close to the earth" (F., 20); "it knows it is beautiful and stands aloof" (F. 28); "it seems to feel itself so much above the other flowers" (F.); it is the type of beauty (9); suggests gentleness, grandeur, stateliness; is jolly, happy, gay (5); suggests boldness, purity (3); it is cross, spiteful,as if it did not enjoy being petted; suggests modesty, cheerfulness, sweet disposition, dignity, bashfulness, strength of character in the double rose, 'the red rose is passionate and quick tempered' (2 each); the sensitive rose is timid and bashful; there is kindness in the rose, the creamy and dark velvety roses always seem so much more calm and dignified; it is loving, warm and friendly, honest and reliable, bright and vivacious, weak in character; "it is sturdy yet gentle, pure and always true," (F., 23); 'the climbing rose seems sociable,' 'the hundred leaved rose is deceitful,' "roses seem sociable because they grow so close together," 'seems dejected and lonely when blossoming alone on the bush,' "the rose is like a blushing maiden," "is a gracious lady in a rich robe" (F., 14); 'roses seem like society people.'

The *lily* is the embodiment of purity (57); it typifies sweetness of nature (7); stateliness (6); pride, reserve, haughtiness (5); "the lily always seems to feel itself so much above the other flowers" (F. 19); "it is haughty and does not associate with the others" (F.); suggests gracefulness (4); dignity, peacefulness and repose, is good (3); modest, true, sad, innocent (2); suggests frailty, strength, bravery, is loving, unselfish, tender, gentle, calm, independent, contented and silent, noble, "lonely and fond of solitude as if the better to impress its goodness and purity upon one" (F.); "the lily seems very pure to me, because it is so white and tall and looks so like a loving flower that no one could help liking it" (F., 14); "suggests a person who is pure, good and unselfish and represents all that is pure and sweet in life" (F., 20). One has often thought of the lily as "a pure innocent child" (F.); "a pure souled woman" (F.); "it seemed like a beautiful and graceful girl gowned in white" (F.); "a pale and delicate girl" (F.). One could never think of a lily looking merry and gay, but gentle, calm and dignified (F.).

One says "I always fancied the lily did not like me. It did not seem to like any one, being so tall, white and cold looking. It seemed so very proud and dignified and the calla-lilies in the house were so far above my head that I could never see them without much trouble.

When about eleven years old I remember looking at one a long while and recollect how much its purity impressed me. I fancied it liked me as well as any one, but that it was too haughty to like anybody." (F.)

The *violet* is most of all modest (56); shy and retiring (23); "the little violets seemed modest and wanted to tuck their heads from sight whenever I came near" (F., 20); sweet, meek (7), gentle and tender (5), suggests humility and lowliness, is loving and affectionate (4), innocent, quiet, sad, true, "it seemed sad and as if it had some trouble it could not forget" (F., 14); "it is modest, never pushing in where it is not wanted, but is found ever sweet and good" (F., 23); "it is retiring and inclined to hold its own sphere" (F., 24); is frail and mild, demure, contented, trusty looking, serene, sociable (1 each). 'The little yellow violets are mischevous' (F.); 'violets suggest nuns' (F.); 'the violet is the timid girl' (F.), and is often thought of as a very modest child (F.); "the violet always suggests modesty to me, and whenever I see a violet, especially if it happens to be growing in a lonely place, I often think of a lonely, modest girl who never enjoys life and the many pleasures in it" (F.); "I think every one thinks of the wood violet as being meek, modest and shy, yet very sweet and lovely" (F).

The *pansy* does not stand pre-eminently for one trait, but has many loving qualities. To many it is sociable or companionable, there is modesty (6), it is roguish and laughing (5), "pansies seem like naughty children" (F., 22); suggest a roguish boy or child dressing up like a grandmother with spectacles and they always seem to laugh at one" (F., 20); "I sometimes think my pansies look like a row of naughty, mischievous boys just out of school, and their little eyes seem fairly to wink at me" (F., 17); there is gentleness (4), weakness, 'white pansies have seemed weak and submissive,' pride, frankness and truth, meekness; it is innocent, saucy, brave, sweet, timid and bashful, affectionate (3 each); jolly, unfaithful, defiant, sly, mocking, sturdy and inclined to hold its own, "a saucy independent fellow" (F., 18); fresh and dainty, dreamy, kind and gentle, quiet, trusty and confiding, shallow; "the pansies have always seemed like little people to me, some seem cross, some pleasant, some timid and shrinking. I remember particularly one stalk which had on it very haughty arrogant flowers and I used to keep those faces turned away from a pure little white pansy near by" (F., 20).

The *sunflower* stands for boldness (14), power and strength (9), seems sociable (5), embodies stateliness, is selfish "like some people that think only of themselves and who are going to have a good time and what they want, whether anybody

else does or not" (F., 20); happy and contented (3 each); proud and haughty, cross (2); overbearing, coarse, harsh, upright, "careless and bold," "leading a sort of Indian life;" "a jolly boisterous fellow," of sunny disposition, eager and always wants to see the sun, open-eyed and wide-awake, brave, friendly, while the odor suggests hatred (M.). "Sunflowers have a very prepossessing look like some people" (F., 23); "are always so strong and sturdy looking as though they could withstand any kind of buffeting" (F.); "always reminds me of a benevolent old gentleman looking down kindly on one" (F.); "seems to have no regard for any other flower, forcing its way up to the sunshine and pure air where it can tower above the others, and look down in scorn upon those who have been more considerate of others; I always thought of it as a very strong, self-willed flower, that was determined to be seen" (F., 26).

The *dandelion* is sociable (8), "seems sociable because it grows bending over as if talking to another one" (M., 14); bold (3), suggests perseverance (2), pride, simplicity, is "rough and hardy," "happy-go-lucky and not at all sensitive" (F., 20); "a little discontented but a jolly little fellow" (F., 19); "not so sweet and gentle as the other flowers" (F., 20); "it is old-faithful" (F., 22).

The *daisy* is sociable (22), bright, cheerful, and happy (9); suggests simplicity (4), daintiness (3), purity (2), wholeheartedness, is brave, "seems brave because it stands up so straight" (F., 14); "pert, saucy and independent" (F.); bold, "always seemed to want to see everything" (F., 26); full of hope, "is everybody's friend" (F., 14).

The *buttercup* is bright and cheerful (4), stands for simplicity, is sociable, happy; "one could never think of a buttercup looking sad" (F.); "suggests a little old lady with a nodding head" (F., 20).

Asters seem sociable; the *wood aster* is sad; *apple blossoms* are wholesome and modest (F); the *anemone* is brave, changeful in mood, sympathetic and pure, sociable, and a solitary flower (M., 14); *bluets* seem pure, suggest innocence and purity, seem gentle and meek, always seem to be at a social gathering; "*bachelor buttons* are hardy frontiersmen who take life as it is and are contented" (F., 19); "are cold and selfish, not even giving a perfume" (F., 22); *bleeding heart* suggests sorrow and sadness (4); "*blue grass* seems to be very meek and to feel its lowliness" (F., 18); "*white clover* is to me like a small child beside a larger sister, the red clover" (F., 20); *chrysanthemum* suggests hardihood; the *cactus* is stubborn (2), "selfish and has thorns because it does not want any one to come near it;" a *cowslip* seems like a

very strong ship that could weather a very stormy sea" (F., 14); the *coxcomb* is proud; *carnations* seem sociable, are friendly, gay, embody truth, and gravity; the *dahlia* is independent and self-reliant, one stood in positive awe of the dahlias, they were so cold and severe that they almost frightened her and she voluntarily kept away from them in her play (F., 18), also show sociability (M., 15). In the *forget-me-not* is gentleness (2), meekness, faithfulness; one used always to think of them as loving (F., 19), and to one they always suggested a lonesome person (F.); *ferns* suggest grace, delicacy and refinement (F., 25); in the *four-o'clock* is cheefulness, "they seemed lazy" (F., 20), and one, used to fancy that they were so stuck up that they would not bloom earlier in the day with other flowers (F.); *grass* is brave (M., 14), and seems sociable (M., 14); *grass flowers* are wild and mischievous (F., 22); *geraniums* are like useful people, they are quarrelsome, voluble, look brave (F., 13); to one, they never seemed to be truly friends of hers, for they were always somewhat formal (F., 18); *golden-rod* has a haughty disposition, is proud, jolly, sociable, and is the maiden-lady of the flowers (F., 23); *hepaticas* seem like little children playing hide and seek, are dainty and lady-like; *hyacinths* suggest trust, sincerity, purity; *indian tobacco* always seemed like little old men (F., 23); the *hollyhock* is proud, overbearing and haughty (4), "bold and likes to show off" (M., 24); "*hollyhocks* are like people who like showy colors in dress and like to see and be seen" (F., 22); seem very graceful and stately, are coarse, sociable, and dull or stupid; the tall hollyhock seemed like the grandmother of the other flowers in the garden and her long deep petals were her bonnet"(F., 22); *heliotropes* suggest meekness; *Jack-in-the-pulpit* seems human and like a nodding minister (M., 14); always seemed like a noisy speaker, "seems like a nice sort of a person" (F., 19); suggests an energetic person, seemed unsociable, "always seemed lonesome to me living alone in his little green house" (F., 19); *lily-of-the-valley* suggests purity (3), has a sweet and wholesome disposition, is delicate and sweet, "seems rather sad and lonely" (F., 13); *lilacs* suggest harmony, "the lilac is beautiful, but is too conscious of it" (F., 20); *marigolds* did not seem to be as nice as other flowers on account of their odor (F., 19); *morning-glories* suggest cheerfulness (2), 'seem to be always smiling;' the *may-apple*, unsociable; the *may-flower* is shy (2), "is timid and does not wish to be seen, so it hides away under the snow" (F.), suggests purity and grace, is a very sociable little flower; the *nasturtium* seemed saucy, and hard-hearted; the *nettle* is mean; the *peony* suggests grandeur, seems bold; *phlox* seemed sociable; *poppies* suggest boldness (3), "seem bold, flaunting their gay colors like peacocks" (F.); boisterous,

haughty, quarrelsome; "the poppy suggests a red-faced man or lady with a hurrying manner" (F., 14); suggests a pompous person; "poppies are bright young ladies very fond of dress and show, vain but pretty" (F., 23); the *primrose* suggests daintiness and purity; the *petunia* is complacent; the *passion flower* always seemed mysterious and melancholy (F.); the *pond-lily* looks pure, "seems so bright and happy in the early morning sunshine" (F., 13); the *rosin-weed* is rough, coarse and uncouth (2); the *sweet-pea* has a sweet disposition (2), suggests hope, white sweet peas suggest purity; "always seemed so tender and so like a little child clinging to some one for support" (F., 20); "they are rather shy, but are cheerful little friends" (F., 19); refined and elevating, pert and saucy, suggesting simplicity and delicacy; the *sweet william* suggests peacefulness; *wild sweet williams* seem gentle and meek, lonely; the *smart-weed* suggests perseverance; *sweet alyssum* always seems to be sympathetic; *spring beauties* suggest daintiness (M., 24); the *sensitive plant* is timid (M., 25); the *thistle* has a haughty disposition, is defiant, sharp and repellant in its nature; "is a solitary outcast and the flowers are all afraid of it" (F., 20); *touch-me-nots* are repulsive like some people, and are sociable flowers; *tulips* suggest gentleness (F., 15), pompous people ,are quarrelsome, "seemed like young girls wearing pretty summer gowns;" the *tiger-lily* seems bold (3), suggests pride (2), fierceness, seems vain and disagreeable, self-satisfied, to one, as a child, they appeared strong and seemed to possess a good deal of character (F., 23); the *verbena* is generous, is delicate and pleasant (M., 24); *wild roses* are shy, sociable, to one, the wild rose always seemed so bright and happy-looking, never covered its face when it rained, always stood up higher than the other flowers in the meadow, yet seemed to have many friends, could be seen for a long distance, and after its pretty pink dress was gone it wore a red one (F., 22); the *zinnia* suggests strength (2), has a hateful and spiteful disposition, seemed a sociable flower; "zinnias are like women dressed in bright calico dresses."

Many imagine friendships and enmities between flowers and between flowers and animals, insects and also people. Their friendships and enmities between themselves are commonly fancifully suggested by various similarities or dissimilarities between them in appearance, size, color, manner of growth. Some of the friendships are fancies from place associations. Flowers of the same kind are friends, also the more beautiful flowers with each other, the larger flowers together, the smaller ones among themselves; sometimes the larger ones and the little ones that they seem to protect; the brightly colored and more showy ones, and the more delicate ones, each with its

own kind, also those growing together and those usually found growing in the same place. Some would fancy them as too good and loving to ever have unfriendly feelings one to another but as all living happily together, those of the same kind as one family and having the same feelings toward each other, that children of the same family would, and those growing near together sympathizing with each other in misfortune. Special friendships are fancied between certain flowers, as between the rose and the violets and carnations, the lily and the violet, the old fashioned flowers being also thought good friends together; friendships between the pansies, violets and lilies of the valley; the golden rod and aster; the daisy and the golden rod,—one when a child believed the golden rod and daisy were married (F); to one the daisy and the buttercup seem to be fast friends, also the violet and the sweet anemone (F. 19); the nasturtium and the morning glory seem to think a lot of each other (F. 15). Jealousies and enmities are imagined between them, the smaller flowers and those less beautiful having unfriendly feelings toward those larger and lovelier than they, and rivalries also existing among the more beautiful; some seeming to turn away and to say, "you are not as good as I am." One always thought of the rose, pansy and those more beautiful flowers as being on bad terms with or thinking themselves above the common dandelion or buttercup and looking with contempt on the common flowers as a stylishly dressed lady would look on a poorly dressed one (F. 19). The rose repels the buttercup and is an enemy to the lilac; the daisy seems jealous of the buttercup's golden cup and the other flowers are jealous of the daisy's white frill (F. 17). One used to think that tulips and hyacinths were jealous of each other, and each would see who could look the nicest (F.). To one it always seemed that one flower tried to be more beautiful than another (F. 19); another could never think them envious, but used to feel that if she plucked the prettiest one, the others would feel their shabbiness. Tall growing flowers and those which seem to push and crowd like the sunflower, hollyhock and dandelion, and the weeds seem unfriendly and cruel to the other flowers. Their movements and actions express their feelings toward one another; one used to think when she saw two pansies bowing toward each other that they were two friends and if they leaned from each other that they had quarrelled (F. 20). Flowers are generally fancied as loving the bees, butterflies and birds, especially, the humming bird. The bee is thought of as the flowers' special friend, and certain flowers like the honeysuckle, rose, clover, cherry blossom, hollyhock are particularly his friends. Insects, birds and the flowers are also fancied as talking together, the flowers seem to open their petals to receive

the insects, and to call the birds whom they love nearer to them. One always imagined when she saw a humming bird or butterfly settle on a flower and close its wings that they were having a confidential chat (F.). Flowers hate and fear insects and worms that harm them, large animals that eat them or injure them and people who treat them cruelly. With some of the animals of the pasture, some flowers that grow there seem to be on friendly terms, and they love people who love them. The cultivated flowers have been thought of as friends to good people and the domesticated animals, the wild flowers as friends of bad people, and wild animals. Noticeable in this section is the strongly imaginative character of these ideas of the friendships and enmities of flowers; the real enmities and the suggested relations in which more of the scientific element is prominent are few in number.

Animistic notions of the physical sufferings which the flowers experience and the emotional feelings which they may have are as frequently brought out in the reminiscent fancies and even more intensely where the expression of such ideas can be more elaborate than in the returns from the children. The feeling on the part of children for the flowers when they see them ill-treated, withered, etc., is constantly evidenced in these returns and in some adult cases it is spoken of as still existing intensely where the actual belief that flowers have feelings is no longer acknowledged but where the feeling about it seems to survive. The fancies are along the same line as those in the previous section under a similar heading, that flowers have feelings as people do, that it hurts them physically to be picked or harmed in any way,—locking the heads of flowers together seems especially cruel, and pressing them together in a bouquet hurts them. It is quite a common fancy with a number when younger that the sap or juice which came from the wounded stem was the blood which the plants shed because they were hurt, or, as a few have believed, that it was the plants' tears. They have felt that they suffer when neglected, feel thirsty just as a person does when not given water, that they suffer from the heat as people do, that when they wither it is because they are tired, that they feel sick and like a person dying.

A common fancy with many is that the flowers must feel sad to be picked and to have to leave the other flowers and that those who are left behind feel lonesome; one, many times could not bear to pick the violets especially for she felt that they wept if separated from the others (F.); another (F.) remembers she would never pick some wild columbine growing near her home because she thought the children columbine would be lonely without the parents, and as she could n't tell the children from the parents, she left them all undisturbed; (F.), in picking pan-

sies would often leave a few to take care of the others that were n't out enough to be picked and keep them from being lonesome. One when picking wild flowers used to stop and think how sad they must feel to be taken away from their companions and the pleasant life which they led, while the pain that she thought they must feel in being picked often restrained her from picking them (F.); one would many times go back and pick a flower which to her looked lonesome (F. 19).

A few have fancied that the plant mourned when its flower died, and that the flowers withered and died from their loneliness and grief at separation from the others; one thinking the reason they withered was because they had cried themselves to death for their mother plant would often refrain from picking the less sturdy flower (F., 22); also, that, when the liquid came from a flower that was picked, it was crying for its mother and sisters and that it just died because it could not go to live with them again (F., 20).

Some have thought that the flowers feel slighted and that it hurts their feelings if some are picked rather than others, or if they are thrown away after being picked. The following typically illustrate these individual fancies:

F., 23. I always thought the wild flowers must feel slighted when the cultivated ones received so much attention, and so I spent much time watering the daisies, buttercups and dandelions.

F., 24. I used to wonder if flowers minded being picked, and if I had in my hand a flower whose stem was broken off near the head, I felt sorry for it, and would not have it thrown away for fear of hurting its feelings. I always hated to throw away withered and old flowers, for it seemed that they must like as much care and attention as the bright fresh flowers.

F., 19. I thought they felt it when they were appreciated and when they were not. If picked for a good purpose, it was a joy to them, but if neglected, they were broken-hearted and soon died.

They are thought of as glad in the bright sunshine, happy in the rain, "for they nodded and smiled when the rain washed their leaves," thankful to be watered, sorry to leave the sun, afraid of being harmed, frightened in a thunder storm; one (F.), when a child of four until she was about six, wondered if they were not frightened when night came and they were left alone in the dark. Some, as children, out of this feeling for flowers, have kissed and caressed them when they were injured, and to encourage them when they seemed wilted and sad. Several tell of even burying the withered flowers, thinking they died just as people do; one, used to believe that the flowers went to heaven when they died (F., 19).

A few of the other interesting and varied individual expressions of these same ideas are added in these quotations.

F. When quite young flowers seemed to feel, see and think just as

we do; they always seemed to me to be partly human and to understand.

F., 17. When the sun shines they lift their bright faces to the sky, when the sun is hidden, they droop their heads. They seem glad when the sun shines, for their faces look brighter, and they seem to sing together in their glee. When the wind blows they dance to its music. They seem like little fairies skipping about in the fields, and like little children as they dance on the hillsides.

F., 19. Ever since I can remember I have thought that flowers had feelings and looked reproachfully at me when I left them without water or proper care. When I was very small, I used to cry when the first snows fell on some loved rose bush or vine. I have cried a good many times when I looked at my petunias after a hard rain, and saw the petals all bruised and torn, for I always had a feeling that they were suffering pain.

F. When I was about ten years old, a beautiful calla-lily was faded and had been thrown out. I felt so sorry for it I decided to keep it and care for it. I wrapped it in a damp cloth and kept it in the cool cellar. Every day I looked at it, and kissed it good night every evening. It seemed quite as real to me as a real human patient.

One, as a little girl, when she saw the dead autumn leaves falling, cried and took them to her mother to have her sympathize with them.

A number of the reminiscent papers mention fancies about flower language, many mentioning their childish beliefs or fancies about flowers similar to those already given in the first section, believing or imagining that the flowers talk among themselves, and in a language of their own, or that the flowers, birds, animals and insects all understand one another. When swayed by the wind, and when they nod and bend toward one another or nestle together, they have been fancied to be whispering, talking and confiding among themselves, or to the wind, to whom they give messages to take to other flowers, and at night to talk together. In some cases, among those in the early teens, the belief in the flowers talking is stated as a present one, while with several among those older, the belief or fancy is still stated strongly as such, about equal proportions giving their childish ideas in this regard as beliefs and as fancies, when they 'fancied they talked,' 'imagined they did' or 'they seemed to them to talk.' Some as children have talked to the flowers as they would to human beings or to their dolls, always believing that they enjoyed it and understood. Their language may be expressed in their looks and movements, and children interpret it according to their individual ideas. When dry, they seem to ask for water, or to say, "please give me a drink," "do not pick me," "we love you," and to say "How do you do?" as they pass them. When they bend and sway they seem to nod and bow, welcoming or beckoning one to come to them, or to show their approval or disapproval as a person would. One always fancied that the daisies moving in the breeze were bowing to one another greeting and kissing each other (F., 17), or that they were polite to each other (F., 19), while a field of

daisies or violets always seemed so happy with their friends on every side to whom they could talk (F., 17); one always fancied that the cute ones were saying something cute to each other, trying to dodge from sight (F). Though the beliefs and fancies about the flowers actually talking in vocal speech or even more silently to one another are almost entirely reminiscent, as we should naturally expect, many in the late teens and succeeding years hold to their possessing a language in a higher sense, largely in the moral qualities with which they now invest them, and also in the beautiful thoughts which flowers inspire, and the feelings that in certain moods they appeal to. Their beauty inspires to right and true living, suggests holier thoughts of the goodness and love of God, and brings feelings of joy and peace.

In their own words several have expressed this appeal as follows:

F. As to the language of flowers, they seem at all times to inspire one to live pure, think true, and do right. When I am surrounded with flowers I usually have a sense of satisfaction. Everything is as pleasant as can be.

F., 20. The language of flowers to me is that they are beautiful, and anything beautiful appeals to me strongly; it makes me want to be good and to have everything harmonize from one's actions to the environment.

F., 19. Flowers speak to me of the kindness of Mother Earth, and of the love of Christ for us.

F., 28. Flowers have no direct language but they appeal silently to different feelings. Their personality expresses much. There is a subtle atmosphere about them that says different things to me.

A few scattered individual expressions further invest flowers with animate life, from their movements and appearance, etc.; several have fancied them trying to hide, one used to think they grew down in the valley, because they were bashful (M.).

F. When the little twigs grew out and branched, I thought they were stretching their arms out to one another. Sometimes I thought they were looking up to heaven and praying.

F. When the leaves turned over before a rain I thought they were asking God for water.

F. Some of the little blossoms look to me just as if they were stretching out their little arms asking to be picked.

A little variation of these phases of childish fancy already quoted comes out quite strongly in some of the replies where a kind of responsive sympathy and feeling of especial kinship seems to be found in the flowers. Some have seemed to feel this quite intensely as children. Direct quotations from the returns show this individual significance most clearly.

F., 20. As a child it seemed as though some flowers were easy to get acquainted with while with others I seemed a perfect stranger. Some flowers seemed to whisper good things to me and I felt better for being around them while some, especially any that are bright red,

seemed to be inciting me to mischief and daring me to do things I ought not to do.

F., 22. I always told my troubles to the flowers and trees and grasses in a language I was sure they understood. One night I had a long cry because I could n't keep from walking on the grass and for days would go about trying to step on stones. I would give them a drink and always talked to them as if they understood.

F. I always thought that flowers understood me and knew and sympathized in my little joys and sorrows. I never thought they knew anything but joy; they are so beautiful that they appeal to me strongly and make me want to be good.

F., 26. Among my earliest recollections of flowers is that of sitting by my mother's pansy bed. The other flowers were attractive to me but the pansies seemed to me human beings. I would sit by them and talk to them and tell them of my troubles and pleasures as it might be. I thought they were lonesome when I went away and were always glad to have me return.

F. I felt I understood them and was never lonely in their company.

M., 24. Flowers always seemed to have the power to talk to me. When I was small whenever I would get angry and want to run away from everybody I would nearly always go out into the orchard or meadow and would invariably go to picking flowers. I would talk to them and often I have imagined that they talked back and shamed me for my rashness in getting angry.

F., 19. Many times I have kissed, petted and sung to the flowers I loved best.

F., 17. I often fondle and caress flowers and catch myself talking to them.

A few express fancies about fairies and flowers; several have thought of the flowers as the homes of fairies, or of the flowers as being something of fairies themselves. One used to think the flowers left the ground at night and held fêtes; (F., 18) partially believed that flowers were inhabited by elves and fairies and that at night the flowers often had a ball at which they danced and had a very good time. To one (F., 22) the wild rose was the fairy goddess and her yellow pollen, her golden wand which she waved when the wind angered her. Another (F., 19) used to think that flowers were fairies in disguise and so could talk to each other and to some people, insects, and animals.

Associations of Flowers. Many have more or less strong associations connected with flowers; (1) most largely with death, (specified in nearly 50% of the returns) in the large number of cases the association being merely general, but in many, however, connected with particular instances, the death of friends and persons near to one. White flowers or the delicately tinted ones are most frequently thus associated, also those with heavy fragrance, quite naturally largely those suggested and prescribed by custom. (2) With places (32%), most of these associations being naturally of purely local and personal interest. Certain flowers recall their homes to many, or places where they have earlier lived, home gardens, friends' gardens

and their homes, churches, various out-door places, fields, meadows, woods, hillsides, river banks, brooks, etc., certain parts of the country where they have been seen growing in profusion or beauty or where they were seen or gathered for the first time; many memories of persons or happenings are also called up in this connection. (3) With friends (22%), flowers being associated with friends or certain people, because some special flower is the person's favorite, from experiences together, or because the flower seems suggestive of the qualities of the person. Other associations with certain events, occasions and experiences are mentioned—weddings, commencement time, Easter, Decoration Day, Christmas time, social occasions, the sick room, birthdays, the stage, etc. The following are typical of the more individual associations.

F., 17. When a child I loved carnations but at a funeral of a very dear friend there were carnations upon the casket, and from the cemetery I brought home one and placed it in alcohol. Since then I cannot bear to see a carnation, smell one, or even think of one; it always makes me think of death.

F., 17. One of my strongest associations with flowers is with the rose, and this flower seems to talk to me of my sister who is dead. It was her favorite flower, and I think this in some measure accounts for the feeling. I never see or smell roses without thinking of something she had said about them; they seem to talk to me of her.

F., 18. I have never liked marigolds because of the mythical story of King Midas which I heard when a small child. Zinnias I have always enjoyed, even though they are not pretty, because a very dear friend always had her back yard filled with their blossoms, and she always allowed me to pick them.

Odors of flowers, with some, are strongly suggestive both in the way of their having strong associations and of producing psychophysical reactions. In these ways their fragrance has suggested most largely death, funerals; certain places,—out-of-door places, the wild woods, green hills, prairies, open fields, running water, home, church, the sick room; friends, various occasions, weddings, commencement time, festive occasions. Their odors are suggestive of spring time, hot summer days, sunshine, freshness, solitude, and the coolness of the woods. Some produce feelings of depression, of solemnity, or as of something impending, or make one feel languid. To one, the smell of heliotrope always suggests the cutting of steel (F., 17); with another, "the smell of the rose makes me feel like reading a story of adventure" (F).

F., 18. The odors have strong associations; violets always make me think of beautiful women in palaces, and tube-roses of some dreadful crime; they always make me feel not only physically but mentally sick; I cannot bear them. The odor of hyacinths makes me think of church on Easter Sunday.

F., 17. Whenever I see or smell tube-roses I always think of death and imagine I am in the room with a dead body.

Superstitions. Not quite half of the returns gave superstitious usages or any superstitions connected with flowers; those most frequently mentioned were 'holding a buttercup under the chin to see if one liked butter;' telling fortunes with the daisy in various ways, blowing the dandelion after it has gone to seed 'to see if your mother wants you,' and to tell the time of day; also the superstition that the four-leaved clover specified good luck, and that looking at a tiger-lily would cause freckles. Mentioned a few times each were the following: holding other yellow flowers like the dandelion or cowslip under the chin to see if a person liked butter, telling fortunes with any petalled flowers, or pulling off the petals to tell if a wish will come true, 'if you blow all the fluffy part of the dandelion, it is a sign you'll have a good dinner;' the one finding the first wild flower or the first violet in spring, will have good luck; to pick the last rose is ill luck; milk from the milk weed causes warts; a person wearing flowers that wither quickly will soon die; flowers or fruit trees blooming out of season, a sign of death.

Nature study. In out-door work directly with flowers in the way of planting them and having gardens, more than four-fifths of all the number report of having had this sort of work. A little larger percentage with the girls had worked among the flowers than with the boys, more of them also seeming to enjoy doing it; of the children reporting directly, more in the large city had had gardens, or planted seeds than of the others. Of the influence of this contact with the flowers, a number especially state that they thus came to love them more, to appreciate them and to be more interested in them. Some few acknowledge that such work 'made them more careful with plants,' 'made them sympathize with them,' 'gave an intimate feeling with them.' About a fourth of the adults spoke of their study of Botany and its influence upon their thoughts and feelings; that it made them 'more interested in flowers, and in their modes of growth,' 'increased their love for flowers,' 'made them observe them more closely, and notice them more especially the wild flowers,' 'made flowers have new beauties to them, and seem more wonderful.' The effect in some few cases was to humanize them more, making them 'seem more like human beings,' and 'as if they had sense and intelligence;' several speak of disliking Botany for the reason that they hated to see the flowers pulled apart and mangled. Five in all acknowledged that such study 'had taken away many fancies about them,' that the flowers thereby 'lost feeling' to them.

Influences from literature, stories or poems read or heard in childhood are acknowledged in a number of the returns, both in the way of shaping the fancies about flowers, though the acknowledged suggestions here are not very numerous, and in

influencing the attitude toward them. Specific stories or poems are mentioned in some cases, though more usually the answers here are more or less general. Some simply say that the stories or poems 'have increased their love for flowers,' 'made them fonder of them,' 'made them have more reverence or regard for them,' 'made them think more about them.' As influencing more the animistic feelings in regard to them, the typical expressions are, "made me think they had feelings and must suffer," "seemed to have more life to me," "made me feel for them," "made me more thoughtful of how I used them," "made me more appreciative and tender of them" (F., 20); "caused me to have a kindlier feeling toward flowers and often to feel for them especially in dry weather" (M.). Several have also acknowledged that they "made flowers seem more human" or "more like persons," "influenced the fancy that I already had that they had human attributes" (F.); "made me personify them more," "after reading 'Flower Fables,' I imagined fairies in flowers, and each flower had an individuality to me after that" (F., 20). Some have indicated such suggestions in giving their definite fancies, a few (4) saying that they received the idea of flowers talking from reading or hearing stories of conversations between the flowers. One was quite sure this fancy of hers about them originated in a dream she had when about seven years old (F.). Fancied external resemblances are acknowledged as thus suggested with four; one would always imagine children's faces in the pansies from pictures of faces looking out of pansy blossoms in one of her books (F). With one (F. 20), "The Reaper and the Flowers," which she heard when quite young, first roused the idea of flowers resembling children, and she used to walk around the flower beds and look carefully into many flowers to see if they really looked like children. Human attributes as applied to flowers were acknowledged as directly and definitely suggested with eight. Friendships and enmities were first thought of and imagined after reading about them, as acknowledged with two. Two said they had thought nothing about flowers possessing feelings until reading a poem which suggested this idea and hearing people talk about it. Several would always afterwards think of the flower just as the poet had written of it. In several instances, too, the mythological stories of certain flowers—hyacinth, narcissus, anemone,—had aroused special sympathy for these flowers.

The literature which was given on most of the returns as favorite poems or stories or those which had influenced the thoughts and feelings in any of these ways in regard to flowers, would seem to be the literature most commonly given in school rather than the real preferences. Most frequently

mentioned were the following: "The Fringed Gentian," Wordsworth's "Daffodils," "Rhodora," "Death of the Flowers," several poems on the Violet, particularly Wordsworth's lines about that flower, "The Death of the Flowers," "To a Mountain Daisy," Tennyson's "Little flower in the crannied wall," Wordworth's poems on "The Daisy," "The Reaper and the Flowers;" also the classic myths of Hyacinthus, Narcissus and Clytia and the story of Picciola by Saintine.

In summing up this material on flower fancies a certain general classification regarding the source of the ideas has already been implicated. The fancies may be all considered as suggestions and associations natural and artificial. Some seem innate and entirely individualistic, displaying an intense and elaborate degree of animism and personification which any suggestion from without is insufficient to explain. Some, as already implied in previous sections, in the fancied resemblances, in the traits applied, and the fancies of their friendships and enmities, are naturally and directly suggested by the flowers themselves, in various ways. Some arise from place associations and some few are from associations with the name. Some are more or less artificial and derived in greater or less degree from literature and hearsay. Noticeable throughout are sex distinctions, which come out particularly in the returns from adults, in the appeal to adolescence. Though the numbers and proportions do not justify entirely unqualified comparison, there are as a fact here, many more absolute negatives regarding these ideas among the young men, and the ideas expressed are noticeably more matter of fact, less elaborate and constructive, while those expressed by the young women are many times more numerous, intense and fanciful. Regarding typical adolescent changes, the whole appeal has with the teens, a far wider and more inward meaning. With the child, the appeal which flowers make is purely to the senses physically, and the feelings ascribed to them are predominantly and acknowledgedly upon a physical basis. Sight and smell as predominantly affected, with the child mediate likes and the corresponding aversions in purely sensuous ways. With the teens, the sense impressions are more deeply and subjectively interpreted; the flowers' appearance in various ways is taken as indicative of inner traits and attributes, color especially is felt and described much more intensely and interpreted symbolically. The deepened sense of their odor causes it to be largely an index to the human attributes which the flowers now seem to possess and suggestive now of their symbolism. Their odor, too, is capable of arousing associations. In touching flowers, delight in "feeling" them on account of the velvety softness and coolness of the petals, and burying the face in them and fondling them, caressing and

kissing them for association's sake are several times specified as heightened reactions to this sense in later years.

Comparing the thoughts and feelings aroused by flowers as evidenced in these returns with impressions which they have made upon the mind of man from remote times, as contained in the great body of folk-lore relating to plants and flowers, we find in many of the ideas themselves and the varied expressions of them much that is essentially similar. The notion of plants possessing a life and personality analogous to human existence, reasoning from the same observation, as does the child now, has prevailed among primitive races from the earliest times. The doctrine of plant-spirits, according to Tylor,[1] "lay deep in the intellectual history of Southeast Asia;" the natives of the Eastern islands ascribe "varua," surviving soul or spirit, to plants as well as to men and animals, and hold that each has its "la" or spirit, the Malays addressing and caring for the rice as though it were a person, the Fijians believing in the survival of plant-souls in a life after their death.[2] The Wallachians have an elaborate superstition that every flower has a soul and that the water-lily is the sinless and scentless flower of the lake which blooms at the gate of Paradise, to judge the rest, and that she will inquire strictly what they have done with their odors.[3] The South Sea islanders hold that the scent of the flower is its spirit.[4] With native American races, the idea of the indwelling spirit in the different forms in the vegetable world is manifested in their totems and in the plant names in various tribes prominent among them and other peoples, while with Indian and Australian races certain plants are tabooed as articles of food by dietary laws through their being *kobongs* of the tribe. The conception of plant-souls has entered into the religion of certain Eastern tribes in the doctrine of transmigration where among Brahmins of the 17th century, and among lower tribes of the Hindoos, to-day, it is believed that the spirit may enter into plants.

This same feeling that plants possess a sentient life and personality led in race history to plant-worship which was widely distributed in early times, holding a prominent place in the history of primitive belief, and which prevails to-day among rude tribes, while its survivals exist in various forms. A most interesting example of this animism still existing as active among a people now and illustrating how it may mount to a defined form of worship, is found among the Mexican Indians.[5]

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[1] Tylor: Primitive Culture, Vol I, p. 427.
[2] *Ibid.*, pp. 428-9.
[3] Folkard: Plant Lore, Legends and Lyrics, p. 463.
[4] Dyer: Folk-lore of Plants, p. 17.
[5] Lumholtz: Unknown Mexico, Vol. I, Ch. xix.

To them, plants as well as human beings have souls, and are attributed mental qualities and feelings of pleasure and pain. They are believed to talk and sing, and when angered or insulted to take their revenge. All this is believed in high degree, especially with regard to the species of small cacti, several varieties of which are designated by the natives as *hikuli*, the eating of which produces a state of exhilaration. From its effects it is believed to be all powerful for good and for protection against evil influences. The plants are considered demigods who have to be treated with great reverence and to whom sacrifices have to be offered. Hikuli is ranked with the highest native deities; the Christian Tarahumare makes the sign of the cross when coming into the presence of the plant; it is always saluted in the same way as a man and supposed to make the customary responses to him. It sings in the fields where it grows, so that the gatherers, who before starting out, must purify themselves, may find it attracted by its beautiful singing. The plants are welcomed with music by the people; the hikuli plant is not kept in the house, but in a separate storehouse, for it is very virtuous and would be easily offended at the sight of any unvirtuous act. It can never be taken from its jar or basket, until meat has been offered it for otherwise it would eat the Indian's soul. Such, in brief, are some of the points of a cult which exhibits a marvellously developed animism. Aside from the elaborate worship of this particular plant, veneration is also felt for those believed to possess curative properties. The lily is invoked with prayer for help, its fragrance being believed to be a power in curing sickness and averting sorcery.

The utility afforded by various plants through their properties seems largely at bottom in the early and primitive peoples' assigning some sort of presence to them to account for their effectiveness, which made them thereby objects of awe and reverence. Their beauties of form, color and fragrance, especially in those warmer countries where they are of such wonderful and strange beauty and gorgeousness, naturally as well roused these same feelings. The impression which a beautiful flower of our land makes upon us is a faint trace of that intense and heightened impression to primitive and ancient peoples with their notions of the world of nature, which is flower-worship. Sacred plants and flowers in Oriental countries testify to a more generalized and higher stage of the original belief of a personality in each plant, and to the impression enforced by contemplation of its usefulness or beauty. The plants and flowers dedicated to the gods and goddesses in Classical and Teutonic mythology, in Christian times transferred to Christ, the Virgin, and the Saints, now evidencing by their names and their prom-

inence in church observances such association and consecration are instances of plant worship at bottom.

The Greek myths of the transformation of human beings into flowers were the expressions of the analogy which they recognized between plant-life and human life. Similarly the various legends of flowers springing from the blood of dying persons the more ancient legends having their parallels and adaptations in different lands and ages, further embody the idea in a little different way. "In German folk-lore, the soul is supposed to take the form of a flower, as a lily or a white rose, and, according to a popular belief, one of these flowers appears on the chairs of those about to die." [1] The German legend of the *Wegewarte*, as they call the succory, stories of flowers springing from the graves of the dead, these and analogous instances illustrate in legend the notion of a parallelism in plant and human life resting more directly upon a conception of them as the habitation of the departed soul. [2]

Notions of the connection of fairies and flowers were once current among Teutonic races and are even accredited more or less in certain districts even now. Various folk-names of flowers, even in the East, the Chinese name for their New Year's daffodil signifying "Water Fairy Flower," and numerous traditions connect them with fairy usages.

Associations of flowers with death and funeral rites are reflected from a widespread use of them in such connection from the most remote times. Different flowers have with different peoples been most appropriately employed, the symbolical meaning attached to them through their appearance or nature many times largely determining their choice. The nations of antiquity used flowers to strew the graves and deck the tombs. The amaranth, its name given by the Greeks from the nature of its blossoms, signifying "unfading," "undying" and hence symbolizing immortality, was much used, also the asphodel and mallow which in some mysterious way were believed to nourish the dead; so the rose particularly among the Romans. In Italy, the periwinkle is Death's flower; in Mexico, a flower from its common usage is the Flower-of-the-dead.[3] With certain primitive peoples, the reason for the use of flowers in this way was in direct accordance with the most primitive conceptions concerning plants. The Tahitians, for example, who endow everything with soul life, believing that the scent is the flower's spirit, supply their dead for many days with the most beautiful and sweet scented flowers holding that their souls are thus

[1] Dyer: Folk-lore of Plants, p. 12.
[2] Philpot: Sacred Tree, pp. 81-84.
[3] Friend: Flowers and Flower Lore, Vol II, p. 571.

transmitted to their service, and may sustain them.[1] In South Wales the flowers which are used in abundance for strewing the graves, must be only the sweet-scented ones.[2]

Their use in marriage rites also dates from ancient times and is based upon the conception of flowers as symbols of fertility, while their employment on all ceremonial occasions and for decoration and adornment, based anciently on religious significance, has a widespread and universal history.

The suggestions aroused by the appearance of flowers in the way of external resemblances have been long since revealed in many plant names, a subject, which in its complete study, would be found to furnish the key to much in their folk-lore. Mr. Earle has said, "Plant names are often of the highest antiquity and more or less common to the whole stream of related nations. Could we penetrate to the original suggestive idea that called forth the name, it would bring valuable information about the first openings of the human mind toward nature; and the merest dream of such a discovery invests with a strange charm the words that could tell, if we could understand, so much of the forgotten infancy of the human race."[3] Names derived from natural history are very numerous, from the roots, leaves or flowers suggesting animals or parts of their bodies. Many of the names in common use express fancied resemblances to animals and birds. The Latin derivation of the columbine is suggestive; there is also the bee flower so-called for "any one unacquainted therewith would take it for a living bee sucking of the flower."[4] Some more fanciful are "cats and kittens," "hens and chickens," "goose and goslings," and those readily suggested names among the orchids. Human resemblances have been largely noted. In Mexico the natives stand in great awe of a flower which they call by a name signifying *hand-flower* which they worship because of the remarkable human resemblance.[5] Among folk names are the fox glove, also the Finger Flower, its Latin name according to Linnæus given it from such resemblances, Fingers and Thumbs, Deadman's Fingers, Devil's Head, Angel-eyes, the old English name Day's eye of the daisy, etc. The human likeness fancied in the pansy has long remained expressed to us in many quaint names in our own and other languages also, Three-Faces-under-a-Hood, Cuddle-me-to-you, Love-in-Idleness, Tittle-my-Fancy, Jump-up-and-kiss-me, etc., which testify to the universal sense of kinship inspired by this favorite. It is also related that this flower,

[1] Miss Lambert: 19th Century, Sept., 1878.
[2] Folkard: p. 198.
[3] Dyer: Folk-lore of Plants, p. 175.
[4] *Ibid.*, p. 173.
[5] Chambs Jour. VIII: 165, art. "Flower Worship."

from its grotesque appearance resembling, "to a fanciful mind an animal with arms and a head projecting and stooping forward" caused Bertram, who was thus led to examine its construction, to devote himself to the study of plants which made him famous as the first American botanist.[1] Other real or fancied resemblances to persons are seen in the old names, Parson and Clerk, Lords and Ladies, Quakers and Shakers, Soldier Orchis, Curl-Doddy, an old Scotch nickname fora flower which looked like a boy's curly head. Other similarities suggested are evidenced by such names as Venus'-chariot-drawn-by-two-doves, Venus' looking glass, flag, key flower, Ger. *Schlussel blume*, David's Harp, a nickname for the Solomon's seal, tulip of Persian derivation from *dulband* turban, while the buttercup was originally button-cop or button-head from its resemblance before the flower opened to a stud of gold, and its name *paigle* derived from the word for mirror recalls its present use in children's play. In color names there is crocus, Gr. saffron, iris, from its flowers being of a variety of colors like the rainbow, snowdrop, Gr. galanthos, lilac a Persian word so called from the color of the flower, chrysanthemum, literally gold flower, etc. Conversely our color epithets as variously applied are many of them directly flower names. Certain old names as "dazzle-flower" for the dandelion, "flamy" for the pansy in reference to its colors seen in the flame of the wood, with our names and comparisons in more common use evidence the strength of the color resemblance.

On the more practical side of the external resemblances noted in plants and flowers rested the doctrine of plant signatures "an ingenious system elaborated for discovering from certain marks or appearances on the various portions of a plant's structure the supposed medicinal virtue attached to it," which was so prominent in the old medical theory and in accordance with which many plant names were given. Likewise, their various markings, form, arrangement of parts, color, have suggested much of the symbolism connected with them and existing to such an extent in ancient civilizations, the trefoil and the passion flower in later times being invested with much sacred symbolic meaning.

The ascribing of inner attributes and traits of character to flowers, from their various characteristics and peculiarities, is largely paralleled in the 'Language of Flowers' which forms an important part in their folk-lore and which can boast of a widespread and ancient history. Ancient Oriental peoples would seem to have been able to communicate entirely by floral signs, and down to the present where symbolism is so prominent,

[1] Folkard, p. 484.

"every indigenous flower has become the symbol of some attribute or idea."[1] Greek legends attest to the poetic feelings inspired by flowers and the human interest attaching to them in the minds of these beauty-loving people whose common expressions in conversation betrayed the influence of impressions from the flower world. "There was no flower to which their imaginations had not affixed some meaning." In the East again the Malay words for flower and woman are identical, betraying the close human associations. In more modern times and countries, these older sentiments and ideas aroused by the flowers have been perpetuated by their acceptance and added to by individuals so that the numerous dictionaries of flowers and floral vocabularies are the results of the compilation of such symbolism from both ancient and modern sources. Thus familiarly, the anemone typifies brevity or sickness, from its fragile nature; flowering almond is a symbol of hope, or haste and vigilance, in scripture; grass, usefulness from its many beneficial qualities; balsam, impatience; primrose, sadness of death in youth from its flower fading early, also typifying modest worth; snowdrop, consolation and hope; narcissus, self love; ivy, fidelity; hyacinth, emblematic of what is sorrowful and sad, from legendary associations more particularly.

The common ground of the fancies of childhood and youth, and those expressed in poetry, is shown in a few scattered quotations from among the countless impressions, some being cited more or less indirectly. The rose has been a favorite of the poets from the early classic and Persian writers, and the 'pathos of the rose' has been a frequent theme. In the numerous epithets applied, it is 'the bravest of the flowers, the love of spring;' "pure fiery rose, rival of the flame in modest maiden guise;" "the virgin rose," "the grace of the earth." So "you violets that first appeare by your pure purple mantles known, like the proud virgins of the yeare;" "the chubby daffodil saucily nodding;" the moccasin flower 'yet shy and proud among the forest flowers in maiden solitude;' purple clover, 'the purple democrat, her sturdy little countenance contending with the grass, near kinsman to herself, the bravest of the host;' the columbine, 'flushing deep, bold and careless, yet wondrous light, maddening, gladdening every one with a gypsy beauty full and fine;' cardinal flower, "dark with passion." In the blue-eyed grass, 'two strange sweet eyes, of more than human pleading, so poet-deep, so maiden shy;' asters are 'starry eyes lighting the meadows when asleep.' 'Ariel lies in the cowslip's bell.' The love of the rose and the nightingale was a favorite theme in Eastern poetry, and the 'bee thro'

[1] Friend: V. II, p. 443.

flowery gardens goes, and from the early lily bears a kiss commended to the rose, and like a wary messenger whispers some amorous story in her ear.' Flowers 'like children, bidding reluctant good night, raise their pretty lips and put their nightgowns on to peep and prance again as children caper when they wake.' In a more purely sensuous appeal, columbine is "a running flame," or "a smouldering fire in her dusky bloom;" golden rod, "leaping watchfires," "pure and genuine gold;" the glowing violet implying "that its fragrance communicates to the flower a warm feeling, as if it were slowly burning, and its perfume were rising from it like invisible incense from a censer," while in Shakespeare's familiar lines, the fragrance of violets is in effect like a sweet cadence in music. Again, with the violet 'comes desire for something else than human gain, and encompassed by its breath, immortality, the vital wish of every human heart.' Of their deeper language it is written of them:

> "Your voiceless lips, O flowers are living preachers,
> Each cup a pulpit, every leaf a book,
>
> . . . . . .
>
> My soul would find in flowers of God's ordaining
> Priests, sermons, shrines."

and in Wordsworth's well-known lines:

> "To me the meanest flower that blows can give
> Thoughts that do often lie too deep for tears."

In conclusion, the following general points brought out by the study, as a whole, may be emphasized.

I. The strong natural interest and love towards flowers in most children, heightened significantly in certain respects in adolescent years, and particularly, so far as may be demonstrated by these returns, with girls.

II. The strongly animistic character of the large number of the reactions towards flowers in the way of their being believed or fancied to be possessed of feelings and thoughts like people, the childish belief often persisting more or less strongly as a *feeling* into adult years, and such thoughts expressing themselves also, as was noticeably brought out, in an intense sympathy with flowers on the child's part, and a peculiar sense of kinship with them; with youth, the personification, to a remarkable degree, of flowers in the way of human attributes and traits of character; this anthropomorphism having its parallels in the impressions made by flowers upon the race, as evidenced in folk-lore, the early animism of the child corresponding to the original underlying notions in the race, and a subsequent attitude especially brought out by these returns, growing out of and developed from the former, having also its analogue

in more highly developed race thought, though in the completeness of the likeness felt to human life, and the details expressed, the animism on the child's part, would seem to exceed its older and earlier expression.

III. The unquestionable place and value of flowers in the cultivation of the imagination, the sense of beauty, and the moral nature of the individual; the feelings of kindness and sympathy which they arouse in the child, the predominantly good and noble qualities with which they are endowed, whether knowingly in terms of the fancy or not, and the amount of such feelings which they inspire, making them unconfessedly or acknowledgedly, a power in this latter direction.

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PEDAGOGICAL ARRESTS AND PECULIARITIES.

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A large literature bears witness to the present interest in the subject of arrested development. It deals, however, almost wholly with the feebleminded and otherwise defective or abnormal classes. Very little has been written about the causes which produce changes in the ability or desire of children to make progress in the subjects of the school curriculum. We seem to accept unthinkingly the idea that only a few are elected to survive society's educational attempt; while we view with unconcern her failure to deal effectively with the large majority who occupy the school benches with impatience, till the legal requirements of attendance are satisfied. President Butler's assertion that two out of every three children are ruined by the schools seems justified if we mean that they are fed with the stones of a traditional curriculum till interest dies and the soul shrivels from malnutrition.

PART I.

Dr. William T. Harris,[1] among others, has spoken of the dangers of arrest caused by poor teaching, pointing out that "a severe drill in mechanical habits of memorizing or calculating, any overcultivation of sense-perception in tender years, may so arrest the development of the soul in a mechanical method of thinking as to prevent further growth into spiritual insight."

With a view to investigating the nature and frequency of such arrests, of ascertaining, if possible, by what methods of teaching they are caused and in what subjects of study they are most likely to occur, this study has been undertaken.

I have been collecting from my classes for a number of years cases of pedagogical arrests and peculiarities. The contributors were college and normal students whose ages fall for the most part between twenty and twenty-five years. The method of securing the material has varied. Some classes after a few words of explanation have been asked to give their arrests; others were asked to describe poor methods of teaching to which they had been subjected and to give any evil effects they had

[1] Psychologic Foundations of Education, p. 142.

suffered in consequence; again, classes were asked to give an invoice of their mental peculiarities. Each method has yielded returns, the first being, however, the most fruitful. Its chief defect is that it leaves the way open for the influence of suggestion.

About 700 of these cases in all have been collected. It is not difficult to find them, indeed the majority of most classes find they have some phase of the so-called arrests.

Geography. Those brought on by geographical study appear to be most numerous. This might be predicted from a number of obvious reasons. Perhaps no other subject in the recent past has been so poorly taught. Few teachers even to-day seem to have a clear idea of the true purpose of teaching the subject. Despite the criticism and protests of our foremost educators, "sailor geography" is in evidence in a vast number of schools. The prevalent idea that one must be able to locate every place, whether of consequence or not, on the ground that it may be needed in one's reading, appears responsible for the close memory grind of insignificant details. Over-emphasis on the study of map questions and of map drawing is without doubt the strongest element in the production of the effects characteristic of these arrests. A large majority being of the visual type, extreme concentration on a symbol during the most plastic period of life, habituates to the use of fixed mental images of maps, globes, etc.

One hundred and ten individuals assert that map drawing or map study has produced inability to image places on the earth, a map is called up instead. These cases are so nearly alike that a few samples will show their nature:

Miss R. says, "Another peculiarity I wish to mention is a more serious case and one which I almost daily deplore, and which might have been avoided by a little forethought on the part of my teachers, or at least, could have been made less evil in its results. As a child in the elementary grades I spent three or four years studying the geography of the United States with the aid of a large and, as I remember it, beautifully colored map. I can see it yet. Day after day it did service as an aid to our text books and day after day, week after week, month after month and year after year we followed the teacher's pointer or used it ourselves in pointing out states, rivers, etc. Not the slightest effort was made on the part of any of the teachers during this period to give us any other mental pictures concerning our country than such as could be furnished by this map. In consequence I still think of all states as little patches of green, red or yellow, as the case may be. That result I do not regret so sorely for it is a common thing. But worse than all the map was hung during all those years upon the south wall of the school room. This reversed all the directions and I still think of Washington State, for instance, as being southeast of here, Florida as being northwest, etc. It would be almost impossible for any one who has not had a similar experience to imagine how very strong this association is. I have no hope of its ever being completely eradicated and nothing but extensive travel, I believe, will ever serve to weaken it."

Another says in part: "At eight years of age I entered a class in M's geography, a text book with supplementary atlas. Several years were spent upon map questions; to-day the mention of even a familiar place suggests a map rather than a mental picture of a place.

Abuse of map drawing appears more vicious than map study. The motor element is here a factor and involves a greater concentration of attention.

"We drew the coast line so often, especially the New England coast, that each indentation as it appeared on the map stands out as vividly as it did then, the result is that I never think of those bays as bodies of water but as small blue spots on the map."

"Mountains were, until I had seen them, just perfectly round, smooth elevations of land, resembling the shape of a hay stack."

"When I began the study of geography I had the misfortune to be under the instruction of a teacher whose chief hobby was map drawing. We were required to draw each group of states three times; once before we studied about them, then, again after we had finished the study of a group and finally to draw the map on the board from memory. These maps became firmly fixed in my memory, and I find it impossible to think of the states or bodies of water in any other way than as they appeared on those maps. For example, whenever I hear the name Erie, I see a little spot about an inch and a half long and half an inch wide colored light blue and lying just above the map of Penn."

Another who had to draw maps from memory says, "In consequence when I now hear a country or a place mentioned I can see the map of the country and the place as distinctly as though they were before me and never think of them in any other way."

All degrees of visualization are found. Some simply report seeing the outline of the map; many others have vivid pictures of the map colored as in book or as drawn with crayons. Few will question the value of map drawing, the criticism must be directed to the extent to which it is carried. Where the child is required to draw and redraw the map from memory it simply amounts to a premium on visual memory and confirms him in the habit of relying upon it.

A curious thing about this whole line of peculiarities, as in the case of number forms, is that the possessor rarely becomes conscious of them or he takes it for granted that every one has them. Some students assert that they suffer no inconvenience from them; one even goes so far as to say that it is a help to him and that he does n't know what he would do in geography if he could n't call up a map, but this is evidently because it is all he has and the effort to get an image of anything else is difficult.

On the whole it seems justifiable to call the peculiarity mentioned an arrest and an injury, to the extent at least that the mind remains satisfied with the visual image of a mere symbol and makes no effort to image the real world of relations. This is often the tragedy of it. One student who has arrests in geography, arithmetic and grammar, and whose intellectual life is on a low level, says that her peculiarities are

no hindrance to her. On the other hand some of my best psychological students have these fixed mental pictures in some one or more subjects. Some who are conscious of the trait state that effort aids somewhat in removing it. A number also assert that travel has proved the best means of correction. This is in line with my own experience. For a long time I visualized only those places I had seen. The map served for all the rest and still does so in my unthinking moments. All this suggests the value of excursions and of outdoor study for beginners in geography—to furnish material for the imagination. More care should be taken to avoid making maps and globes objects to be studied for their own sakes. Attention also must be given to making the transition from them to the reality for which they stand. The number of those who think of places only in their relations to each other on the map will then be much smaller.

While undue drill seems to cause the peculiarities, yet in many cases geographical knowledge is misconceived from lack of proper explanation at the time. Here are some cases of early associations remaining permanent for this reason.

"When I think of Penn. I always see it within a map of Kansas, for my earliest impression is of seeing it so represented for comparison as to size."

One imagines "the North Pole is a place where a small pole two inches in diameter and ten feet high is sticking from the earth."

Another says "My first geography teacher explained that the earth was a globe floating in the air with a pole pointing toward the north and another toward the south. In thinking of the north pole I see it on a schoolroom globe floating in the air.".

"When thinking of Texas I see the surface as a tier of steps. This was the first impression I received of the meaning of the word "Steppes."

Such cases as the following may bear on the question of the origin of such terms as "Up North" and "Down South."

"I used to think that rivers never could flow north because that would be flowing up hill as north was always up on the map." Another who makes the same statement adds "this may have been helped by the fact that my home was on a southerly slope and I had never been north of the divide."

One thinks of "the boundary lines as being high fences, usually wire fences but in places stone. The fence around Kansas is the highest." Again, "I thought that there was a well travelled road around each state for a boundary. This was probably because I lived within half a mile of such a state line." Another: "I think of countries and states as being separated by a line and expect the country to look different upon crossing the line."

Another evil arises from the ignorant or careless placing of maps. Sixty-five report having to fight for a proper conception of directions on the earth. The needof correct orientation is a real one to many people, and my subjects speak in many cases of the troubled state of mind when this is lacking. Every one knows the sense of discomfort experienced in being "turned

around" on coming into a new place. It is a sense of bewilderment at times amounting to positive pain. The explanation seems to lie in man's instinctive desire to know his environment. In the primitive state it was a matter of life and death. A similar uncomfortable feeling is experienced by many when thinking of places on the earth. They testify to an effort that must be made each time in thinking geographical directions. The trouble in every case appears due to the mistake of hanging the map on other than the north wall of the schoolroom. Here is one of the cases.

"My sense of direction is faulty. When I began to study the United States from a map, it was in school where the seats faced the south and the large map hung on the south wall. As a result of this my first thought of the New England States, for instance, places them to the southwest as that would correspond to their place on the map. This is true even yet, though by an effort I can avoid this since I know where they are. The same is true of all other places. In fact I must constantly readjust my location of places by a second thought growing out of what I know to be true."

As showing the power of early associations it is worth noting that many who are not at a loss as to orientation still go back as a matter of course to a map on a certain wall of a schoolroom to get their directions.

They are like this:—"Whenever I want to locate a town in Kansas, I must see the map of Kansas open on my desk in the old schoolhouse at home. My desk faced the north and until I see the book open on that desk I cannot locate a city. As I think of the desk I invariably face the north. This did not strike me as peculiar for I always did it."

A peculiarity surprisingly common, though only indirectly geographical, is the difficulty of distinguishing the right and left hands. Thinking of right and left in connection with a certain schoolroom where it was first learned is the most common; many go back to some other association of childhood by which they settle the question. Some of these ways of determining the question are as follows:

"For years I had to imagine myself whittling to determine which was the right and left hand." "I cannot think through the process by which I learned to distinguish my right and left hands so readily as I can that of direction. It is necessary for me to mentally place myself back in the room where I learned directions, face north, think that the sun rises in the east and then mentally touch my left hand, saying to myself 'this is my left hand.'" "By thinking of the hand which used to have so many warts on it as the right." "By imagining myself sitting at the piano." "Used to pick up something." "Had habit of rubbing ring on left hand with thumb." "Am equally right and left handed and have to place myself in the position in which I learned the difference between them." "Teacher told me as a child that my right hand was the one next my seat when standing in the aisle, and to this day I cannot tell without taking a small portion of time to bring up the old association." "By thinking on which side I used to have a pocket in my dress." "Think of myself writing." "By

stopping to see which hand I use in throwing anything." "Clench my hands tightly; the strongest grip tells me which is the right." "Look at broken finger in right hand."

Arithmetical Peculiarities. Ever since General Walker called attention to school conditions in Boston the idea has been gaining ground that we are insisting on too much arithmetic. Prof. Patrick and others have called attention to the fact that number work is given too early in our schools. President Eliot also has shown that the acquisitions of young children are relatively too insignificant in amount to warrant subjecting them to the grind usual to the primary years. The whole school system is permeated with the idea that a knowledge of number is vital for success in life. Hence we find it occupying the place of honor through the eight grades of the city school and almost the sole subject of study for many in the rural schools. No one will dispute in the least the necessity of having the essentials of arithmetic well taught at the right time. A certain additional value, indeed, may be admitted to come from the solving of "numerical conundrums," in the line of giving the idea of the ability to achieve. In yielding to the curious fascination of puzzle solving, however, this quality of persistence may be too dearly bought. One student says that he worked a year on one problem, and another states that he never found a problem that he could not solve. Given this state of concentration, a meager curriculum, and years spent in going over and over the same ground with the mind occupied with quantitative ideas, and it appears easy to account for the peculiarities found in the cases.

Seemingly the most serious phase of number arrest is the counting habit, called arithmomania when so pronounced as to become pathological. Classification of cases showed forty of these of varying intensity. Later inquiry, however, reveals the fact that several counters are likely to be found in every large class. The trait really seems to be a misfortune, impeding or hindering progress in other directions; numerical relations and quantitative ideas fill the mind to the exclusion of things causal and qualitative. It is not necessarily the result of poor teaching except the poor teaching of giving mathematics too early or too intensively.

"From my mathematical training I am under a constant nervous strain in my desire to enumerate everything I see. In our school more attention was given to arithmetic than to any other study. We almost thought in numbers and ever since then I have had a desire to count the telegraph poles, the boards in the sidewalk and the trees along the way."

"Mathematics was not difficult for me and I liked it. Much of my time in my early school days was spent in working problems and the tendency to see number in everything soon became evident. When I walked I would count my steps; when I rode in a buggy or car I would

count the fence posts or telegraph poles passed; when I went fishing and the fish did not bite I would think 'now if I don't get a bite before I count to fifty I will see if the bait is gone,' etc. Later in the high school I had a great liking for geometry and spent so much time solving original problems and in drawing triangles, rectangles, etc., that everything in nature would form into some of these shapes. My tendency to do this is decreasing but yet in most cases I will notice the shape of an object or the form of a group before color, size, etc."

I quote the following account of a precocious boy by one who knows him to exhibit this tendency in its extreme form:

"O. E., aged eight, belonging to a large family of brothers and sisters, exceptionally dull in school was subject from infancy to epilepsy, attended by violent convulsions and final stupor, awaking with no knowledge of what had taken place. His mind ran to mathematics, in which he would make countless examples relating to any objects with which he was familiar. He would count, for example, the number of feet in the logs in the wood pile, the number of fence posts in the sections, how big a wood pile these would make, how many fence posts the stove wood in the pile would make, etc. By the doctor's advice he was to be kept from making these calculations, but his mind was so active that this was impossible. He was continually teasing his parents with: "Give me some numbers to add," or "I can tell you how many feet in," etc. "When I last knew him five years ago there seemed to be little hope of his ever becoming better without special medical treatment, and each of his violent attacks weakened him for days following."

Lindley and Partridge[1] in their study of Mental Automatisms, say that the most probable foundation of the counting impulse is the susceptibility to rhythm so strong in childhood. "A succession of impressions starts automatisms and seems to summate these responses and to induce a sympathetic vibration in the whole organism." Such cases as the following seem to bear out this claim:

"I have a habit of counting by the alternate contraction and relaxation of the muscles of my legs and arms. I often count my steps when I walk and spell words to myself as I alternately contract and relax the muscles as before mentioned. I have counted that row of electric lights on the arch over the front of the stage in the assembly room hundreds of times and also the plaster of paris panels of which each circle of the arch is composed."

Another inveterate counter says that she has a feeling of unpleasantness if the number of objects counted ends in an odd number, perhaps from leaving the rhythm incomplete. It may, however, be from other causes, as a preference for even numbers. Other elements are involved, however, as is seen in this one: "If I succeed in counting all these in a certain distance the number is never remembered, but if I lose count before finishing there is a feeling of unpleasantness." Large numbers

[1] Lindley and Partridge: Some Mental Automatisms, *Ped. Sem.*, Vol. V, pp. 41-60.

carry forward in life the use of various devices acquired when beginning number work. The habit of counting on the fingers is common. In my returns the making of dots with the pencil or counting by taps of the finger occurs even more frequently.

"In arithmetic I became addicted to the habit of adding on my fingers. Even now, especially if I become a little confused, I find it easier to revert to the old method."

"I do not remember of ever knowing anything of combinations. To find out, for instance, what two and two were I always had to count, until I learned it by myself. This arrest has been partly overcome by my high-school work and also by my own teaching, but I often find it creeping into my work especially, if I am tired, to confuse and retard me."

A teacher of thirty says',"Instead of counting on my fingers I made dots; for three I made a vertical row of three dots, for four two rows of two; for six I counted the three twice and for eight the four twice, etc. I kept up that method until I was ashamed and made myself do the work mentally. Sometimes now I find myself counting in that old way before I realize what I am doing."

These little mental habits are truly arrests. Where the slow operation of counting is persisted in it interferes with the proper acquisition of the power required to think combinations. Many peculiar mental automatisms result from the devices of early number work. A few of these may be of interest: One girl who was taught to add and subtract by the aid of an abacus says, "for several years it was impossible for me to get away from those red and green balls, and to this day I scarcely ever add a column without recalling them unconsciously."

Another learned the digits by fitting together sliced birds and now always sees them in the old connection. Some write at one side the figure to be carried or make the corresponding number of marks. The "borrow and pay back" method of subtraction often persists through the years. One student in adding counts on to the number the prongs of the 3 or 4. When paying close attention to a subject another finds herself running up the scale of number by twos, threes or tens. Another writes 1234 continually. Another writes dollar signs by the hundreds. Instead of the different digits some visualize corresponding groups of dots. One says "I always see the picture of the number on my fingers. When recalling a number, as 352 for example, I see the first three fingers then the whole hand and then the first two." Some see the problem being worked out on a mental blackboard. Others note the set of mind given them by years of working for the answer, also the effect of using a rule not understood. Students who learned the multiplication table in concert report being compelled to start at the beginning and go to the combination desired. It is common for certain combinations in the table to persist in being difficult to think. Too much written number

work is harmful, as it habituates the pupil to the use of pencil and paper for even the simplest problems.

Many cannot get the product of two numbers until they have a mental image of it in the form given on the blackboard in the schoolroom where they first learned the multiplication table. In connection with these may be mentioned the number forms of which many were found. While they exhibit little that is new a few cases strikingly illustrate how such forms arise. They serve also to show the close connection between this class of phenomena and the other peculiarities mentioned. The following is the simplest and with its variations the most common number form: "When taught the numbers from one to one hundred they were placed on the board in a horizontal line, the first line being from one to twenty, just below a line containing the numbers from twenty-one to forty and in the next from forty-one to sixty, etc. Now I see the numbers in just those lines."

The teacher who used the method mentioned below evidently had the common clock faced form and succeeded in communicating it to her pupils. "A circle was placed on the blackboard and the figures always occupied the same positions on it. A long time elapsed before I could multiply without going back to the beginning and even now when I think of 6 x 7 etc. there comes to my mind a picture of that circle and the exact place that the figures occupied." One of the many who have images of numbers as they appear on a mental blackboard says, "When I learned the numbers I never saw them in any other form. I did not know then that they could be."

The apperceptive bent given the mental reactions by continued drill in a subject is well illustrated in the case of a six-year-old child known to me who was being pushed in his number work by a teacher desiring his promotion. "Mamma," he remarked one day, "I am getting so that when I ride or walk in the street I see the combinations in the windows of the houses we pass." Another time, seeing the velvet trimmings on a little girl's clothes, he exclaimed, "Myrtle has combinations of five on her cloak."

The close relation between number forms and the other forms described in these pages has been pointed out. In both the curious products of mental activity other than conscious are seen. The whole subject seems to resolve itself into a study of the bases of mental automatisms, and furnishes much material which a believer in double personality would charge to the credit of a subliminal self, but which could doubtless be explained as the tendency of the mind to continue to react along the line of certain subtle associations. However, when a student sees what he reads or hears assuming the diagrammed

form, when he sees his problems being worked out before him on a mental blackboard, or in the common occurrence of dreaming out a problem, and especially in such instances as those mentioned below where one seems to be a passive observer of a series of changes that appear to come of themselves, the belief in a kind of psychical activity outside of ordinary consciousness is easily formed. A good instance of this kind will be found in the account of the peculiar and very intricate games or word contests which occupied the mind of Mr. Arthur Clark from the age of five to manhood. (Reported in Vol. XIII, *Am. Jour. Psy.*). He insisted that the forms of these contests, which appeared at different times of his life, grew in his mind without conscious attention or formulation, and the groups seemed to go through their successive changes when in operation as mechanically as the changes produced by a moving picture machine. "A word in process of change did not take its ultimate form at one move but each step was separate and distinct though very rapid, as the final result seemed almost instantaneous. After the changes began my mind seemed to be passive and I was merely an onlooker and not a conscious director." A similar trait appears in another of my students in regard to number.

"When in any manner the idea of number enters my mind there is always aroused a mental image of the ten digits in a horizontal row. I hear 35 for example: As the mental process is going on this row of digits appears about six inches before my eyes as shadowy, transparent, spiritual, active things; then the 3 seems to step out of the row and come nearer, then the 5 comes from its place and stops by the side of the 3 and I have the image 35. Suppose I want to write a number, say 358: from the row of digits the 3 comes to the point of my pen, then the 5 followed by the 8, each in the order used, but when I think the number the digits fall into their places simultaneously.

When a figure moves out of its place in the row as mentioned, it does not leave a vacancy, as its place is filled by another of that order at once. I do not see these recruits take their places. They simply appear to be there in inexhaustible supply.

It is an enjoyable experiment for me to introspect the mental process while performing mathematical operations. The digits move about to their places, the row, however, always remaining full, a digit coming from here another from there, each moving to its place as if it had a mind of its own and knew what to do."

Language. Strong criticism of the language work in the schools is often made on the ground that little power in its use as a tool is developed. Language is necessary to profitable thinking, and it is also the indispensable means of recording what man has thought and done in the past. It is one of the strongest bonds of union in social life and the instinct to express himself will carry the child far toward its acquisition. He should not be made too language conscious for the first three or four years of his school course but by unconscious imitation

in oral story and nature work should be brought to the use of the correct language forms. Language as a school subject in the early grades, is a means and not an end in itself. The study of formal grammar is unsuitable for these years and the so-called language-lessons are often no better. Children dislike the "picking apart" process and the abstractions of word-relation. By such exercises the mind is left so clogged with technical, and to the child, unmeaning rules, the parsing tendency, and various automatisms induced by too much diagramming, as to prevent attention to the content side. When his stage of development warrants taking the subject to advantage, too often he has acquired a distaste for it and for good literature also; this arrests progress, and perhaps one of the most serious arrests is that which comes from the death of an interest.

While not so many arrests were reported in this subject, its harmfulness was more often deplored.

Diagramming, the lazy teacher's method of passing the time, brings more surely than any other the result that content gives way to form. If anything so artificial can be at all justified it must be for only a brief period at the fit time. In general this, and the parsing process also, is begun too soon and prolonged to too great length. I quote cases here to emphasize the poor teaching which focalizes energy on words and neglects the essential thing for which they stand.

As a result of her study of "The Vision of Sir Launfal," "Idyls of the King," etc., one says "I am always picturing the words on red lines of a diagram and not getting the thought of the poem."

"I often find myself repeating other peoples' expressions to see if they are correct. I see the words as subject, predicate, etc., divided off by lines as we learned to do in diagramming."

"For a long time sentences were diagrammed roughly, then copied very carefully into nice note books. The lines were made with red ink. In studying a difficult sentence now I mentally diagram it and sometimes use the red lines."

"When I speak, sentences often arrange themselves on a diagram, that is I diagram the sentence on a form."

"When I speak I see the words in print before me. Sometimes I see the sentences diagrammed, at other times I pick out the figures of speech instead of giving my thought to what is said."

Analysis, parsing and drill in sentence forms generally produce the same result as diagramming: absorption in the structure and too often dislike for literary study.

"The thought of a selection often had to give way to the analysis. I loved to diagram and analyze, and this, with my class drill, caused me always to be picking out subject and predicate or clause. In this way I lost the thought in paying undue attention to the construction of the sentence."

"When studying Ruskin's essays we were made to diagram and pay such close attention to the syntax that the literary merit was destroyed. I have never had the interest in Ruskin's essays since that I should have."

A common confession is that of directing attention to a speaker only to discover awkward expressions and grammatical errors. Many say that a conscious effort is needed to prevent dwelling on mispronunciations and other such mistakes. This is due in large part to the teaching of those who have become critical of pronunciation and sentence structure, or who try to measure literary expression from a grammatical standpoint.

"I never hear any one speak without noting the words used and often how awkward they sound, also the grammatical errors. I also find myself thinking how much better such and such a word would sound in a given place."

"The first thing I notice and judge a person by is his language. Correct pronunciation is soothing to me. Errors in pronunciation lower a person in my estimation. For instance, I once heard a lecture on Savonarola which was really fine, but the lecturer's pronunciation of Savonarola worried me."

The failure of some to develop ability in oral expression is blamed to teachers who had a mania for written work. They recall Dr. Hall's charge of teachers conducting correspondence classes with the pupils before them. So, failure in composition is charged to teachers who gave abstract subjects on which pupils had nothing to say and thus fostered in them the idea that composition was not a possibility for them; and surely this idea of incapacity is a real arrest.

Miscellaneous. In history, the peculiarities mentioned are such as have come from the word for word memory method of study so widely prevalent. The facts which are remembered are recalled through verbal images localized on a certain part of a page and in a certain part of the book. The following case is typical:

"In history I never recall the accounts of the Thirteen Colonies without seeing the pages where they occurred in Swinton's History and the pictures of the state seals at the beginning of the topics."

Other arrests for which the public school teacher is not so directly culpable may be simply enumerated. Failure to learn music because there was no early cultivation of the rhythmic sense when at its flood, typified by the account of the girl who had no music in the family and learned no tunes. At seventeen she could not learn even simple tunes.

Some speak of being unable to conceive of God and religion except in the incongruous forms of early childhood. This is a serious pedagogic arrest as well as arraignment of the current religious teaching of the Sunday School and home.

A great number bewail what may be called the "social arrest." This takes the form of timidity, bashfulness, lack of ease in the presence of others, especially the other sex, lack of self-confidence and of ability to make an oral recitation, etc.

In ending the list I would name as the most serious of all the faults of the school its failure to arouse in the child the idea that he can do things, in other words, the power of initiative. In the study of the causes of this failure the facts given in these pages have a bearing.

Pedagogists will differ regarding the amount of importance to be given the peculiarities mentioned in this article. If, as it seems to me, they do interfere with the proper development of later mental powers they are to be guarded against. The causes of most of them may be found in the teacher's ignorance or disregard of the nascent periods of the child. Over-zealous drilling to secure thoroughness in any period fixes the child's mode of thinking in that level of development. Long continued use of the object method may interfere with the growth of memory and the imagination. So, too intensive drill in memory work inclines the mind to set forms of imaging, and prevents its rise to the higher stage of critical reflection. The testimony of those reporting arrests shows this. Through all the cases can be seen running the great law of economy:—In geography a map is called up, in grammar a diagram, etc., for the mind finds it easier to react in the forms habit has given.

A large proportion of these arrests are the result of a diminution of interest in the work and a lack of that high enthusiasm for study essential to success. This, however, is in large part simply another aspect of the question of drill, for the consequence of repetition is inevitably loss of interest. Youth demands change, and dwelling too long on a subject brings fatigue to an individual whose nervous system is on a high tension. Drill, then, is admissible only where the interest continues. Swift[1] has shown experimentally that "it is not mere practice but successful practice that counts," and that "school work continued to the point of fatigue is disastrous." If this principle were applied it would effect almost a revolution in many schools.

PART II.

The Case of Bright Children.

I introduce here for their incidental bearing on school arrests notes on some so-called precocious children. For several years I have been asking teachers and our students who have been teachers, for accounts of extraordinarily bright children known to them. My collection has now grown to 52 cases pretty well distributed over the State of Kansas with a few from outside.

These children are not all of the prodigy type. Some are

[1] *Am. Jour. Psy.*, Vol. XIV, p. 223.

apparently simply the brightest the observers have known judged by the teacher's standard of ability to learn the school subjects. The data do not always cover all the points desired. The records are often incomplete by reason of the temporary tenure of the teacher's position. Some of the cases were observed through a long series of years, others but for a year or two. However, a majority of them are sufficiently interesting to warrant printing, but even in summarized form only a few can be given.

Of the 52 cases 36 are boys, a preponderance probably accidental but at least suggesting a line of inquiry for students of sex differences.

In only 8 cases is the child said to be above the average in ability in all lines of study. Two cases summarized will show their nature.

Boy. Could read at two and use correctly any words he heard others use, at three read the Third Reader and almost anything in the newspaper and could tell it. At two used to gather the children of the neighborhood together and tell them stories. Throughout his school course was good in all lines and is now, at fifteen, a junior in college.

Boy. At three, because of his insistent teasing, was allowed to enter school; was intensely interested in all the school work and was soon ahead of the average student of six or seven; learned easily in all lines of work. This continued for three years, then he lost interest and in the ten years since has had no interest in school work which also has seemed difficult to him.

In most cases, however, where the nature of the ability is mentioned it is special, and in over 50 per cent. of the cases is an exhibition of memory. This is shown along the line of reading history and literature, committing lessons to memory and learning spelling.

Girl. Was in school at five. Could learn anything requiring memory; learned and recited long pieces of literature that would be difficult for a 14-year-old. Impossible to teach her number though she tried hard to understand it. When about eight years old she seemed to lose all power of learning, could n't memorize and forgot what she had learned, though she continued to work hard. She is a very nervous child, small and delicate and with a speech defect.

Boy. Eleven years old. Not good in mathematics. Has a wonderful memory for history, learns long lessons word for word, dates and all and remembers them; not so good in other branches. Seems like a little old man both in speech and appearance.

Boy. Ten years old when observed. Had as much general information as most men of twenty-five. Had the power of glancing over a page and telling everything on it. Could read over a history and then tell everything in it, even getting the dates right. He was a sickly boy and when last heard of his parents were talking of taking him out of school.

Six are said to be good in mathematics and to like it. Ten disliked this subject or were pronounced incapable of acquiring

it. These were all found in the group of memorizers mentioned above. Two had special ability in music and two in drawing. These were poor in all the school work except one of the latter who was fair in mathematics and was the only one who did not flatten out later. He is succeeding as an architect.

The most striking fact in the case of these children is the large number who fail to carry out the promise of their early childhood. They are the pick of thousands of children who have come under the observation of these teachers, yet in over 40 per cent. of them retardation or complete arrest of progress is mentioned.

Boy. Began school before he was four, at five was in the Third Reader, knew the multiplication table and was classed with pupils three years older than himself. In his third year in school he did not make any progress nor for the two years following. He then began to learn slowly, but had lost all his interest in school by that time. He is now a young man of very ordinary mental equipment.

Boy. Came to school at four years of age. Had remarkable power of imagination and a splendid memory. Learned to read rapidly and was quite good in numbers. The second year he seemed no farther advanced than at first, had forgotten all he learned and had little interest in the work. He was nervous, small and delicate. Father drinks and mother not strong mentally nor physically.

Boy. First observed in the third grade, much younger than the average of the class. Exceedingly bright in all his work and a great reader. Went through the grades rapidly, skipping a class every year. On the grounds was pugnacious and overbearing. For reasons not known the evil tendencies later gained the ascendency; he became one of the bad boys of the school and town and was sent as an incorrigible to the Industrial School.

Boy. From five to seven was very bright. Had a good memory and recited exceedingly well. About eight stagnation set in and he did not seem able to keep up with his class at all. He was here lost sight of.

Boy. Showed himself on entering school far brighter than his fellows, passed into the third grade the first year. During second year "he became swelled up over his advancement and would not associate with other children. He reached his height in these first two years, passing over five grades. He then spent three years in one grade, quit school and became a street loafer. Two brothers are mentally defective.

It is not at all likely that the 40 per cent. in which arrest is mentioned, cover all who fail to maintain their initial rate of progress. In a large number the observers lost sight of the case reported while he was still in the bright stage. Certainly a considerable number of these should be added to the list.

My data are not sufficient in all cases to enable me to state the causes of these arrests. In many the reasons appear. In part they are those furnished by the school system and by the conditions of the home life. In addition must be mentioned certain deep-seated causes that always raise the question of the normality of precocity and genius. The debate is not yet at an end, nor has Lombroso been driven from the field. It seems

to me that the precocious are of two classes: first, those possessing unusual ability and a long period of plasticity—the Gladstone type; second, the flash-in-the-pan-type—bright in the morning of life, but becoming stupid or worse later—reminding one of the little apple tree, too young for normal bearing, which, becoming infested with borers, blooms, sets fruit and dies untimely.

In these 52 cases of bright children 54 per cent. are frail, weak, delicate, are peculiar or abnormal, have St. Vitus Dance or epilepsy, become insane, or have insanity or some form of abnormality in the family; this is a much larger proportion than is found among school children in general. A few cases, much abbreviated, follow.

Boy. At two and a half years could read, at six was in the fourth grade. Observer states that he could converse on any subject. Always used large words. Hates mathematics and is dull in it. Has a wonderful memory. It is impossible to get him to play, is slow in his movements, does n't care for the company of children, prefers to converse with older people. He has always been delicate and now, at nine, is threatened with St. Vitus Dance.

Boy. Very bright at twelve in arithmetic and geography but dull in other lines. He is frail and subject to spasms.

Girl. Exceedingly bright as a child, She was required by her stepmother to get her lessons in summer as well as in winter, spring and fall. Graduated at the State University one of the youngest in her class and shortly thereafter became insane. Her father was a drunkard and her mother died in an insane asylum.

Girl. At six months could say several words, at one year could carry a simple tune. Was much further advanced in her studies than other children of her age until her tenth year when she had St. Vitus Dance. Since then she has not been brilliant and barely holds her own in her work.

Boy. Only son of a minister. As a young boy was exceedingly bright, was pushed and hurried by his sisters who were school teachers. After making remarkable progress his mind suddenly gave way in his early teens. He was weak physically and subject to epileptic fits.

In the case of those who are plainly abnormal, nothing further need be said regarding the cause of arrest. As to the larger number of the remainder, however, the cause is not so obvious. Two periods of arrest seemed most prominent in the cases. The first from seven to nine, the other at about the age of adolescence. The explanation for a large number of the first is, perhaps, found in the fact that they began at three, four or five years of age to do work unwarranted at that stage of brain development. Possessing strong memories and being pushed and stimulated, a fact stated in a number of the cases, by relatives or by teachers, who made "pets" of them, they maintain their reputation for two to three years when their immature brain cells seem to lose their early power of response and further development is impaired.

In the second group one element in the explanation of the

stagnation which characterizes them is probably the result of continuing elementary methods after the passion for change comes which heralds approaching adolescence. A good memorizer too often comes to depend in his recitation upon his ability to repeat words; no careful habits of study are formed and when the more serious subjects of the high school or later grades, which require some exercise of logical power, arrive to displace the primary subjects, he is incapable of making the transition. Many other causes, of course, come in, especially among the rank and file, to make the school distasteful at this time.

DYNAMIC BIOLOGY IN THE COLLEGE COURSE.

By C. F. Hodge, Clark University.

II.

Huxley cast the mould of our present course in biology about 1870. At that time his work was the stroke of a master genius and marked an epoch in modern biological instruction. In symmetry and perfection the course is a crystal of logic, and I do not see how any one who followed it, either under the great master himself or under his co-author, Martin, could ever fail in appreciation of its value or cease to regard this course with a certain degree of reverence. Still, as one who took the course with Martin, I feel that the time has come for a complete metamorphosis and moult. If I may be permitted to carry out the figure a little farther, it seems to me that the Huxley-Martin course represents a chrysalis stage in the development of the science—a time of ideal internal perfecting—and that it is to be succeeded by the adult stage in which the biologist must take his place as an active power in the community.

Transformations and moultings are difficult processes at best. The problem involved in the present instance is to save all that is best in the past and make the necessary adjustments to the demands of the present. That radical changes are imperative, is manifest on all sides. "Do you still use Huxley and Martin in the biological course at the Hopkins?" I recently asked the professor in charge. "No," he said, "we have not been able to work with that for a number of years. We use ———'s book, but it is not adapted to our course, and there is no book that is." Within a year the entire "biological" department in the high school of a progressive New England city was thrown out, ostensibly, on account of lack of room, but really, I think, because it had degenerated into technical, college botany and zoölogy. The recent action of the Regents of the State of New York, in discontinuing the old courses in botany and zoölogy in the secondary schools, putting *biology* in their place, is another case in point. In adapting the work to the required three years' basis at Clark, it was proposed to omit "freshman biology" altogether "as not of much account anyway." After discussing the matter, however, President Wright finally said: "Well, if we can have a new deal in freshman biology, there is not a subject I would rather have in the curriculum."

I propose to describe in some detail this "new deal" as it has taken form during the past three years. Before doing this, however, we shall need to follow the course of biological instruction from Huxley's time down to the present. Some may be inclined to think that there have been a number of "moults" already, but it seems to me that these are all to be classified under internal movements of resorption and inversion in preparation for the final change.

Huxley defined science as "trained and organized common sense." Before that, science was "classified and arranged knowledge." Before Huxley inaugurated the biological epoch, we had botany and zoölogy as two separate museums with the specimens classified, arranged and named. They were all dead and there was little common sense in either their classification, arrangement or naming. There were no organizing or vitalizing principles that united the two museums. Since the handling and study of dead animals and plants is a disagreeable task at best, most, if not all, of our courses in botany and zoölogy were done by the text-book method. Our heritage from this old regime is still in evidence in the fact that in some institutions the botanists and zoölogists are divided into not only distinct but jealous camps. "What a chance you have for these experiments," I remarked to a zoölogist friend in a large university, "with a greenhouse of your own." "You are greatly mistaken," he replied, "that greenhouse belongs to the botanical department. They have nothing in it, but a zoölogist does n't dare show his head inside." And then I made the mental note that there was very little in his magnificent aquaria and that probably no botanist need apply. In another instance a gall in a plant was sent to the botanist of a college, with a request for information. The botanist promptly sent it over to the zoölogical department as a case of insect work. The zoölogist reported "no insects present, probably a fungus;" and back it went to the botanist. I understand it finally dropped between the departments.

Biology is defined as the study of living things in their widest relations. It is inherently dynamic. It deals with the forces which act and interact upon organisms and which they themselves exert. I have emphasized the close relation which exists between dynamic biology and evolution in the preceding paper; and, while the science was christened by Lamark and Trivarinus in 1802, as a reincarnation of the older evolutionary thought of the Greeks, and as an expression of the inadequate attempts toward a consistent philosophy of evolution of their time, it was really born in the evolutionary work of Huxley. For him the biological view was a logical neces-

sity. He could no longer be either a botanist or a zoölogist. As he says in the preface to his first edition:

"Very soon after I began to teach Natural History, or what we now call Biology, at the Royal School of Mines, some twenty years ago, I arrived at the conviction that the study of living bodies is really one discipline, which is divided into Botany and Zoölogy simply as a matter of convenience; and that the scientific zoölogist should no more be ignorant of the fundamental phenomena of vegetable life, than the scientific Botanist of those of animal existence."

The old botany and zoölogy could give us only at best an imperfect philosophy of plants and animals. What we need is a philosophy of life itself.

Huxley's series of types is a list to conjure by. I name them in the order in which they occur in his book: Yeast, Protococcus, Amœba, bacteria,—then up the plant series with—Moulds, Stoneworts, Ferns, flowering plants—then back to the protozoa and up the animal side with—Vorticella, Hydra, Fresh-water Mussel, Crayfish, Frog. For the mature student, this logical sequence from the simple to the complex on the side of both animals and plants could leave little to be desired. Every one who followed this course in the laboratory came out by logical necessity an evolutionist and no teaching of the dogma was necessary. In fact this was tactfully held in abeyance, each member of the class being allowed to draw his own conclusions from the facts themselves. I well remember on completing this course in the Johns Hopkins our class had to wait upon Dr. Martin by special committee with the request that he give some additional lectures on the doctrine of evolution itself.

I should add, perhaps, that the course was filled out by a number of types, like Spirogyra, Vaucheria and Polytrichum, Earthworm, Perch, Turtle, Pigeon and Rat; and the work was concluded with the embryology of the chick. This gathered up all the loose ends and tied them fast. As given by Dr. Martin himself, I still look back upon it as the most ideal course I ever had, and in it we saw in microcosm a vision of the evolutionary process,—a form actually weaving its organization from a single cell, a protozoan, to a vertebrate, all in three days time.

I must also add that coming to this course as a mature post-graduate student my intense enjoyment of it has left me a confirmed stickler for the logical order. As a pure discipline in inductive reasoning nothing can supplant it. Still with immature students I realize that to begin with the Protozoa and Protophyta, the one-celled animals and plants, is really casting pearls before newly hatched chicks. They need gravel first and unless they have it, this most ideal and suggestive part of

the whole course is passed over before they are able to think what it means and they may be biologically crippled in consequence. How I avoid this in my present course will be cleared up a little later. Martin clung to the logical order to the end, but Huxley, after a few years' trial, changed it completely to what we may call a more natural or psychological order.

The reader should at this point refer to Huxley's preface to his "Revised Edition" (it should be read in full) in which he says:

"But besides these changes, the reader who compares the two editions will observe that the order in which the subjects are presented is completely changed. In the first edition the lowest forms of life were first dealt with; the series of plants followed in ascending order; and then the series of animals, from the Bell animalcule upwards to the Frog.

"No doubt there is much to be said for the principle of this arrangement, which leads the student from the study of simple to that of complex phenomena; but the experience of the Lecture room and the Laboratory taught me that philosophical as it might be in the theory, it had defects in practice.

. . . . . .

"After two or three years' trial of this road from the simple to the complex, I became so thoroughly convinced that the way from the known to the unknown was easier for students, that I reversed my course, and began with such animals as a Rabbit or a Frog, about which everybody knows something, while their anatomy and physiology is illustrated by innumerable analogies with those of our own bodies."

Martin never admitted the cogency of this reasoning, but maintained that since we must descend to the cellular elements in order to an intelligent understanding of physiological process and anatomical organization, and since the bulk of the work dealt with minute and technical anatomical details, this order really plunged the student into not only one "unknown" but into a "most bewildering and complicated maze of unknowns." The first edition devotes 108 pages to the Frog, the Revised, 172, and other topics are likewise amplified, so that from a trim little book of 266 pages, the Revised Edition has grown to 498 pages. When Martin saw the Revised Edition, I heard him say in disgust: "It is a clear case of fatty degeneration."

I think Martin was right on both counts—as to the bewilderment of anatomical details, which makes the new edition unusable, and as to the "fatty degeneration," which vitiates the whole and makes it undigestible. Some may be inclined to think that this is raking up dead issues; but to one who is grappling with the problem of biological education in the college and university and trying to co-ordinate with this elementary instruction and the present needs of the masses they are still very much alive. And I hope to show how, by adopting the dynamic view-point, we may be greatly aided in escaping

the difficulties of too great anatomical and unessential detail and still have a mentally and morally virile course.

Huxley was a biologist and physiologist by inclination but was forced to be an anatomist by the stress of his battle for evolution. Martin had already passed beyond the heat of this conflict and was a biologist and physiologist to the end. While Darwin did most of the work, it fell to Huxley's lot to fight his battles; and known as he is as the "bull-dog of evolution," since the struggle was fought out on the details of comparative anatomy, his position compelled him to be the foremost master of his data. Naturally the course of instruction which he formulated then was dominated by this fact. It fitted the time to perfection and was a veritable sowing of dragons' teeth to raise up champions for the cause.

Now the conflict is over, evolution has triumphed, and has become the common possession of thinking men. Is it not time to pause and ask ourselves whether a war measure adopted amid the clash of arms should be continued in force indefinitely? Is there no present conflict? Are there not modern issues that should largely dominate our choice of matter and method to-day? Is it less true now that "My people are destroyed for lack of knowledge?" Is the ancient monster of ignorance and prejudice and unfaith in life any less grim to-day? And when the people ask for bread, how long can the biologist put them off with: "Here is a most interesting fossil, will it not do as well?" And when they ask for a fish, how long shall we continue to offer them a type specimen of a snake instead?

The problem is extremely complicated, and in trying to weigh the values which shall determine the elements of our course, we can hardly hope to avoid mistakes and incur more or less serious misunderstandings. There are, of course, new issues and these have influenced modifications of our present courses in biology. Before speaking of these, however, we need to emphasize especially one point with reference to the Huxley-Martin phase of biological instruction. It was splendidly adapted to specialists. It is still a good course for beginners on the road toward medicine or toward professional biology. For those—and they ought to be the vast majority—who look to biology for help toward a liberal education and a sound philosophy of life, it is simply preposterous.

T. Jeffrey Parker's Elementary Biology appeared in 1891. The author is essentially a comparative anatomist and a morphological zoölogist, to the teaching of which subjects he has rendered illustrious services. He is thus well fitted to give us an ultra perfect type-specimen course of essentially form and structure studies. Still the physiological side is good and, apart from the lack of adequate suggestion for experiment, is

all that could be desired. Parker holds to Huxley's original logical order as of too "immense advantage" for the student to be lightly given up, but meets the difficulty by beginning in the laboratory with some preliminary study of a higher animal and plant, more purely physiological and biological. And he also makes the significant statement in his preface that this kind of work might be extended with advantage: "If there were no limitations as to time, and if it were possible to avoid altogether the valley of the shadow of the coming examination." This latter raises the interesting question whether leaders in rapidly growing sciences should maim their students or educate or, failing in that, dynamite their examining boards.

Parker's course emphasizes another point that is most timely. There is already a very general feeling that mere laboratory work may be overdone. There are so many facts, and they are all so "interesting and important" that the most careful of us are in danger of loading the student so heavily with facts that he has no time or energy to think. With this danger in mind, I think that all teachers of biology, who are not too young to have grasped the "ideas" or are not petrified in the Gradgrind mould, will agree with Parker when he says: "That the main object of teaching biology as a part of a liberal education is to familiarize the student not so much with the facts as with the ideas of science."

Personally I feel that the greatest defect in Parker's book is its flawless perfection and completeness. I even hesitate to use it with my own students; because it runs along so smoothly, satisfyingly and restfully; because it typifies that "just-so," *ipse dixit* lecture style that soothes to sleep rather than stimulates to effort, that I fear the students will come out satisfied with what they know rather than eager investigators. In this I do not mean, of course, investigators in biology in the technical sense but, what is infinitely more important, investigators into the problems of their own lives.

Finally we now pass to a type of biological course which places the main emphasis upon the cell as the structural and physiological unit. Pre-eminent in this field is Sedgwick and Wilson's General Biology. No one can question for a moment the importance of the problems in this field to the highly specialized biologist and through him to the public at large. They represent vital and present issues about which the materials and methods of a course intended to produce specialists might group themselves naturally enough. The science of cellular structures and activities, cytology, forms in many respects the present growing tip of biology, and must furnish an increasingly large mass of foundation material for physiology

and hygiene; and, as applied to the reproductive cells, forms the natural basis for a science of heredity.

The feature of this course is the study of few types—Earthworm and Fern—so exhaustively and with such careful attention to fundamental processes and principles that the student will be equipped to study any desired form of animal or plant in a similar way. Theoretically this would seem well adapted to produce specialized investigators. On the side of practical working, however, we are brought to realize that technical equipment can never make an investigator. He must have a tremendous amount of motive power to keep his technique in working order.

From a well developed understanding of the subject as a whole, he must feel that his problem is worthy of his best efforts. Until we give him the "ideas" that can supply this motive power, the danger in forcing the student to the apex of specialization is that he feels that he has already reached the goal. We tire him out so that instead of being strengthened and inspired to go on, he lays down the work with a sigh of relief.

I am inclined to place most of the work in all courses of this character in the stratum of university instruction. For the college the bulk of the course should be on a much lower plane, much more directly and obviously related to the commoner problems of life, and requiring much less specialized technique.

In tracing the progress of biological instruction from Huxley's time down to the present we have seen that the tendency has been toward ever higher and higher specialization. The biologists have flown off on a tangent until they form a little group by themselves, working on their special problems, talking a language of their own and writing books for one another. In the main they have gone far beyond the hail of educated people in other professions. As the science of life itself it would seem that biology should touch the common life more intimately than any other body of knowledge. Is it not true that even now we need another Huxley to bring the science and the world together again?

In 1868, while Huxley was yet a biologist, he wrote an inspired passage—I often call it the finest in scientific literature—which I always read to the class as the text of our year's work.. It is all so good, and I see it referred to so rarely, I give it in full.

"And by way of beginning, let us ask ourselves—What is education? Above all things, What is our ideal of a thoroughly liberal education?—of that education which, if we could begin life again, we would give ourselves—of that education which, if we could mould the fates to our own will, we would give our children? Well, I know not what may

be your conceptions upon this matter, but I will tell you mine, and I hope I shall find that our views are not very discrepant.

"Suppose it were perfectly certain that the life and fortune of every one of us would, one day or other, depend on his winning or losing a game at chess. Don't you think that we should all consider it to be a primary duty to learn at least the names and moves of the pieces; to have a notion of a gambit, and a keen eye for all the means of giving and getting out of check? Do you not think that we should look with a disapprobation amounting to scorn, upon the father who allowed his son, or the state which allowed its members, to grow up without knowing a pawn from a knight?

"Yet it is a very plain and elementary truth, that the life, the fortune, and the happiness of every one of us, and, more or less, of those who are connected with us, do depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. It is a game which has been played for untold ages, every man and woman of us being one of the two players in a game of his or her own. The chess-board is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of Nature. The player on the other side is hidden from us. We know that his play is always fair, just and patient. But also we know, to our cost, that he never overlooks a mistake, or makes the smallest allowance for ignorance. To the man who plays well, the highest stakes are paid, with that sort of overflowing generosity with which the strong shows delight in strength. And one who plays ill is checkmated—without haste, but without remorse.

"My metaphor will remind some of you of the famous picture in which Retzsch has depicted Satan playing at chess with a man for his soul. Substitute for the mocking fiend in that picture a calm, strong angel who is playing for love, as we say, and would rather lose than win—and I should accept it as an image of human life.

"Well what I mean by education is learning the rules of this mighty game. In other words, education is the instruction of the intellect in the laws of Nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws. For me, education means neither more nor less than this. Anything which professes to call itself education must be tried by this standard, and if it fails to stand the test, I will not call it education, whatever may be the force of authority, or of numbers, upon the other side." (A liberal Education and where to Find it. Science and Education Essays, pp. 81 ff. Appleton & Co., 1896.)

"To learn what is true in order to do what is right," is another way Huxley had of stating his position; and I have often asked myself what possible connection the learning of a great many of the anatomical details, even in his first edition, could have not only with "doing what is right" but with doing anything at all in case of the non-special student. As he says in his first preface: "The chief labor in drawing up these instructions has fallen on Dr. Martin." Much as I cherish his memory, I think we must remember that he was a young man when he worked out the details of his course. He was a specialist and had not studied principles or methods of education particularly, and he gave the course a distinct coloring of the period.

I have thus come to feel that this whole scheme of biological education has been accorded far more consideration than its due, and has long outlived its usefulness for all purposes of general culture, and I take my leave of it in the confident hope that we shall now be able to find a course better adapted to the needs of the time.

Within the last thirty years real university work has developed to a high degree of efficiency in this country and the preparation of specialists should be relegated to that. Aside from some preparation of a premedical character or for elementary teaching, the problem in the college is to develop courses in biological subjects that shall have the greatest culture value possible; and this, with reference to good citizenship and intelligent living rather than to future specialization.

In the Collegiate Department of Clark University this problem is being solved as follows: I shall describe in detail only the first-year biology, merely naming the other courses in order to show its setting.

First Year.	Second Year.	Third Year.
Dynamic Biology.	Zoölogy, Invertebrate and Vertebrate. Vertebrate Morphology and Embryology (as premedical). Botany, Structural, Systematic and Ecological.	Animal Physiology and Hygiene and Histology, (including a brief course in Bacteriology). Plant Physiology, Histology and Plant Diseases.

The laboratory work is made somewhat different in most of the courses for general culture and pre-professional students.

Study Living Things as Forces in Nature. This, which may be taken as the motto of the first year's course, expresses the change of point of view from the anatomical to the dynamic. This change, of course, furnishes a different set of criteria, under which to select and arrange the subject matter. Still the anatomical type series has recognized scientific value and the fact that this is merely subordinated and not disregarded will be clear as we proceed with the details of the course. The question, then, becomes—What forces in nature have the greatest educational value and what types best serve to exemplify them? We must, of course, answer it strictly with reference to the attainments and needs of our students. Nothing is farther from my mind than to wish to see the course in dynamic biology become as rigid and fixed as the one I hope it may supersede. In fact, it seems to me that it has internal life and plasticity which shall keep it growing. It should differ in important details in different localities, but the greatest change must come from the changing needs of successive classes. Especially now that nature study is being developed in the public schools, as soon as the men come from the high school with

sufficient knowledge of living things, insects, birds, and other common animals, trees, native plants, fungi, etc., to make them good citizens and enable them to play their part in the game of life, it will be time to take another decided moult out of the course I have suggested below. There is plenty of room ahead for that, however, and I only hope the time for it may come soon.

The dynamic types and the order in which they are studied may be seen at a glance in the following diagram.

From the order in which the types are studied it will be seen that ours resembles Huxley's revised course; and, clearly, we may be as "logical" in passing from the complex to the simple as the reverse. We have here the double advantage of gliding easily down on the animal side, thereby gaining momentum to rise through an ideal series of plant forms on the other side. And there is a distinct advantage in studying the vertebrates,

including a glimpse of embryology at the close, as the natural completion of the year's study. The immense superiority and advantage of vertebrate structure and organization over all other plans cannot be properly sensed unless this order is followed.

Dynamically, insects are of the utmost importance, and zoölogically this is the age of insects. There are more than ten times as many insect species as of any other animals; and practically insects form the best possible introduction to the course. They furnish an abundance of forms with which to develop ideas of animal classification without even mentioning "cells" in the introductory lessons. Best of all, fully half the laboratory work through September and October may be done out of doors, a feature to which I attach great importance throughout the course. So far as practicable I would have the student find his specimens for himself and study them in their natural environment first and then bring them into the laboratory for further examination. In practice, however, this cannot be done without too great sacrifice of time and most of the types are not in the best condition for study at the season when the class must do the work; but many of their own specimens the students can collect for themselves, and many more, for the next year's class. All may thus be given incentive and experience in collecting in the field.

During the winter months—from November to April—the laboratory work is almost entirely indoors. Then again from April to June fishes, reptiles, amphibia and birds, together with trees and many points in the plant series purposely left to this time,—supply both matter and motive for out-door study.

After a preliminary lecture hour, in which, however, the class is *not* told what an insect is, the students are provided with collecting outfits and directed to gather in everything they know or think is an insect and nothing they think is not an insect. They are told to turn over logs and stones, tear to pieces old stumps, examine the bark of trees and hunt among the foliage and in the chinks and crevices of fences and buildings. The result of a three-hour laboratory period spent in this way should be the collection of from 100 to 1,000 specimens. We realize, however, how different this is from the usual methods when a number of the class come in without a single insect. "Could n't find any!" One man, a six footer, told me in all seriousness that he had hunted faithfully all the afternoon and did succeed in catching one mosquito, but—"it got away from me!" Generally, however, there will be a few in the class who will bring in enough to distribute to the rest and as a last resort requisition may be made upon the laboratory stock. In a lecture period, having named and described in gen-

eral terms the parts of an insect, we devote the next laboratory exercise to the attempt on the part of each student to classify his material. Along with this work a brief study of the external anatomy of the locust, requiring outline drawings, is made to familiarize the student with the data of classification. Then follows a standard scheme for the classification of insects and the student is furnished a mimeograph copy which he learns to use as an artificial key, and by the aid of which he selects from his own collected material one or more specimens illustrating each class and mounts them for future reference and study.

The next question is: What insect or insects do we wish to pay special attention to as dynamic types? In response to local conditions we selected the mosquitoes and the San Jose scale and have used them for the three years past, and shall probably continue to do so as long as they represent interesting dynamic problems. In addition to these, however, and in connection with students' collections and out-door laboratory work a number of other insects of importance both injurious and beneficial were discussed. On leaving the subject of insects, each member of the class is allowed to choose some insect, or group of insects, to work out during the remainder of the year the life history, foods, natural enemies and general dynamic relations. Toward the end of the year the student presents his results in the form of a lecture before the class; and, at the outset, he is informed that the manner in which this investigation is done will count heavily for or against his rank in the class. I know of no device which serves so well to develop initiative and reveal any facility for investigation which may exist in the class.

The object of all this work with insects is not so much information, or knowledge of anatomy or of systematic discrimination of minute details, or training of the powers of observation. These are only incidental and subordinate results of the chief purpose, which is to introduce the student to the dynamic problem of modern entomology; to actually let him try his hand at it, and learn how it feels to work in the field himself.

I shall not be able to enter even thus fully into details with many of the other topics. I consider one of the chief values to the student of this year in general biology to be the glimpse he gets of the different departments of the science. I look upon the course as a hallway through which to enter any desired department and if his view does not lead to specialization, we may surely make the course yield intelligent interests.

The insect work is on the whole rather easy, on the surface of things, and though the class has been analyzing mosquitoes by their claws, palpi and wing venation, and has studied the mouth parts of the San Jose scale with the compound micro-

scope, it has had no really tough propositions to test its metal. Something of this sort must come pretty early in the course, and it happens conveniently that the Crustacea follow the insects, and that we have a type which might have been made to order for the express purpose of demonstrating how much organization can be crowded into an almost microscopic animal. Cyclops strikes the students like lightning out of a cloudless sky, and they go down before it in heaps. They grovel and groan and give it up. But, finally, when asked whether they really intend to be beaten by such a little creature, most of them straighten their backs and do some creditable work. Of course they have laboratory specimens of lobster, crawfish and a number of the crabs for comparison, and they do a little work with Daphne, and have their attention called to a number of the parasitic marine copepods. A further reason for selecting this type is that dynamically the copepods are probably of greater biological importance as furnishing a food supply for marine and fresh water fishes than all the other groups combined.

With the earthworm as the type of annelid the first serious work is done with internal anatomy. This is studied out organ for organ and cell for cell, but from the point of view of discovering the mechanism by means of which vegetable mould is formed. Other forms are used in a subsidiary way, viz., the tape worm trichina and other nemetodes, flukes, etc., which have dynamic problems associated with them.

The fresh water clam is studied largely from the anatomical standpoint, except that experiments and observations emphasize its foods and its water filtering power. Hydra is used in the usual way as a morphological type.

As many and as varied protozoan forms are studied as time will permit—Acineta, Paramœcium, Stylonichia, Stentor, Vorticella, Actinospherium, Arcella, Amœba, Euglena, Volvox; and special attention is directed to the water-polluting forms—Dinobryin, Synura, Uroglena, Glenodinium and Peridinium. Emphasis is also placed upon the Sporozoa in relation to malaria and other diseases and upon certain Amœbas which cause dysentery. Studied dynamically, with regard to variety of device and mechanism for movement, for securing food and in relation to reproductive power, no part of the course is of greater suggestive value to the student. No forms are so well adapted for showing the plasticity, the tireless activity and the infinite resourcefulness of living matter. All this supplies additional reasons for placing the protozoa in the very heart of our biological course.

Ascent through the plant series is now easy and may be rapidly made, the rather complete list of type forms being cor-

related and used in the laboratory in such wise as to assist rather than hinder the progress of the class. The types are studied in much the usual way, the dynamic features being subordination of structural details while emphasizing the active processes of growth and transformation of food materials. Everything is studied alive and at work, the attempt is made to show the class as many active processes—cell division, conjugation, starch formation, etc., as possible,—special stress being placed on the great reproductive energy of many of the lower forms. For all this the types and the order in which they are introduced speak for themselves. Among the algæ special attention is again called to the water-polluting forms—Asterionella, Anabæna, Clathrocystis, Cœlosphœrium and Aphanizomenon.

The fungi are taken up from much the same general point of view as the insects, prominence being given to the dynamic and economic problems involved. Members of the class are encouraged to work out research-wise the life history of such forms as Monilia, black knot, Peronospera, peach-leaf-curl and other rusts, mildews, smuts and blights. In this way the students are introduced into the important problems of plant diseases.

The fern is used as the type for the minute study of a plant much as the earthworm is on the animal side, and it is worked out cell for cell in root, rhizome and leaf. Thorough work here renders very facile the following studies of the structure of seeds, for which sprouting wheat and the peach serve as excellent types, historic, dynamic and suggestive to the core.

The bacteria are purposely pushed out of their logical position to the end of the laboratory series of plant studies on account of their manifold dynamic relations. A number of the standard culture media are made, demonstration-wise, in the laboratory and distributed in tubes and Petri dishes so that each student may make plantings from the air, water and dust, fly tracks, etc., and thus get a practical insight into bacteriological methods. By the courtesy of Dr. Moore samples of nitrogen fixing bacteria were obtained from Washington, and clover seed was inoculated and planted in pots in the laboratory. Comparative plots were also planted in a garden near by and several of the students did the same in their own gardens. Stained sections of root tubercles were next studied. Of course no culture experiments with pathogenic bacteria are attempted in such an elementary course, although sealed cultures are used for demonstration and prepared slides of a number of important forms are used in a similar way. For example, by the kindness of the physicians in charge a hundred sputum slides were obtained from the sanitarium at Rutland and each student

works over ten marked slides and passes in a written diagnosis as though he were a member of the hospital staff.

The text-book for part of this subject is the Board of Health Reports of the City of Worcester, and, after discussing the general topic of city sanitation and pointing out the diseases that are clearly known to be of bacterial origin, each member of the class is required to go over the entire report, without consultation with others, and hand in a written report giving his estimate of the number of preventable cases of death or disease for the year.

In this way the student is given a clear, practical notion of the rôle bacteria play in the economy of nature—as symbiotic, saprophytic and parasitic, and is thus introduced into the problems of modern bacteriology.

From this point on—which should be about the first of April—the course branches into a number of individual and small-group lines. The main branch, only part of the laboratory work of which is required of the whole class, passes up into vertebrate morphology and biology with a fish, frog, bird and mammal as the types. The pre-medical men, and those who are preparing to teach biology, study the types in much the usual way; but even here experience of the department has indicated that the structural may well be largely subordinated to the biological as giving the more fundamental and educational values for first-year work. The tendency is, thus, to crowd the purely morphological details more and more over into the two succeeding years, giving them a somewhat definitely specialized character.

The outline of this work is, briefly, Fishes, general plan of organization; common species with habitats, foods and spawning habits and seasons, numbers of eggs produced, methods of fishing to be employed in order to keep waters properly stocked.

The Batrachia are studied in much the same way except that the pre-professional section of the class spend more time with the anatomy, and the eggs are used for the outlines of vertebrate embryology—instead of the chick as used in Dr. Martin's course. More attention is also paid to the insectivorous habits of the group by way of feeding tests in the laboratory. The spawning habits and seasons, too, have been more carefully followed by the successive classes in the hope of publishing a complete account of this subject for all our common species of frogs, tree frogs, toads and salamanders. This is genuine investigation in which all the class take part during the spring months—and in some cases the study is continued voluntarily throughout the summer vacation—and the results will fill a serious gap in our natural history. These animals are practi-

cally all more or less important insect destroyers, and knowledge along these lines must come to underlie all practical work calculated to maintain the different species at their greatest efficiency.

The work with turtles and snakes is little more than incidental. A number of specimens are always collected during out-door laboratory periods and these may be utilized by some member of the class for feeding tests, and they also serve to demonstrate in a general way the various types of organization and some of the salient biological relations.

The study of birds is begun early in the fall with a brief statement that each member of the class will be required to know at least one hundred common species and be able by the end of the course to describe them as to color, markings, notes and songs, migration periods, habitats, nesting habits, and especially foods. By thus early sketching the plan of work for the year the student is enabled to organize all the knowledge he already has and utilize every opportunity for observation which may render his knowledge more complete. His attention is also called to a number of standard bird books including many of the U. S. Government Reports which give the foods and economic values of different species. These are kept for reference on a shelf in the laboratory. He is also required to supply himself with a field note book, and this is inspected from time to time, suggestions made, and then finally graded at the end of the year according to amount of work accomplished.

The species used as a dynamic and anatomical type is the English sparrow. The Bulletin of the United States Department of Agriculture on the English Sparrow in North America is referred to in detail on the foods and economic status of the species. The students are directed to note carefully observations under these heads, especially with regard to the relations between the English sparrow and native species, and finally the most effective methods of dealing with the intruders are considered.

Little work is attempted with mammals beyond noting general organization, and position in the animal series, leaving practically all the anatomy and special physiology to succeeding years. Toward the end, a little review work and some general suggestions are directed toward comparing the nervous systems of the various invertebrate and vertebrate types to introduce the student to the problems of modern neurology.

In order to accord plants their due share of attention a few suggestions toward systematic botany and the means of determining species are given and particular attention is directed to habits, habitats, seasons of flowering and ripening seed, geographical range and economic importance of native forest trees.

This part of the course is intended to give the students a glimpse into systematic botany and forestry.

I should add in conclusion one other feature of the entire course. The æsthetic is an important factor in the study of living nature; and while I should be inclined to give dynamic relations precedence in determining selection of types, between two types of equal dynamic importance I should choose the more beautiful. And, furthermore, we constantly discover æsthetic elements in the ugliest of types; and when by the aid of the dynamic standpoint we gain an insight into adjustments with environment and harmony in nature, we reach a deeper plane of æsthetic relations even more vital to our philosophies of life than that which lies on the surface. Very little can be said about all this and the less said the better, so long as the student is brought into personal relation to the fact that nature is beautiful to the core. Haeckel's "Kunst Formen der Nature" is the text for this phase of the course.

Nothing is farther from my thought than to claim for the above course anything approaching perfection. In fact, one of my chief motives for submitting it to the public in this form is to ask for criticism and suggestion by any who may be struggling with the same problem. I may add that from three years' experience the course seems to meet the requirements of the case rather better than I had dared to hope. It has apparently enabled a number of my students to discover their bent and decide upon their life work. Many more, who are specializing in directions other than biology, bear ample testimony that the work has not died within them but has become one among the number of permanent and cherished interests. When a young man a year or two after taking the course comes to me and says: "I am coming to realize more and more what our study of biology really means. Walking used to be rather dull business with me, but now it is more interesting than a novel. Every bird and tree and moss and fern and insect, frog, toad, fish or even snake has something new and interesting to tell me," may we not feel that we are, at least, approaching a solution to our problem?

I cannot close without again acknowledging my indebtedness to Huxley; and when he writes: (Evolution and Ethics, p. 50, 1893.) "Thus the most obvious attribute of the cosmos is its impermanence. It assumes the aspect not so much of a permanent entity as of a changeful process, in which naught endures save the flow of energy and the rational order which pervades it"—is he not clearly pointing toward dynamic biology? And again he says: "I cannot but think that there is room for all of us to work in helping to bridge over the great abyss of ignorance which lies at our feet."

BOYS' GANGS.[1]

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Conditions of the Study. The boys who furnished the reports that form the basis of this study are pupils of the Lyman School for Boys, Westborough, Mass. When the boys enter the school they are examined in their studies and asked a number of questions concerning their social life before coming to this school: their homes, school, church, and associates. The answers to the last subject led to the study of the gang. It took a long time to learn how best to ask the questions, but after a while the boys answered naturally and freely. After they had been in the school for some time and we had become better acquainted, several were questioned the second time and told what was being done with their answers and asked to help in the work. This many of them freely did.

The names of boys are not given but each number given refers in every record to the same gang. The answers are often not in good English and sometimes seemingly contradictory, but they are written down as nearly as possible in the boys' own words.

The following list of questions was asked and the answers recorded at once.

Name? Age? Nationality? How many boys did you go with? What is the name of your crowd? How old is the oldest? Youngest? What are the nationalities of the boys? How many French, Irish, Germans, etc.? Do you have any nicknames? What are they? Why called this name? How often were you (boys) together? Where did you meet? Did you allow other fellows around there? Who was the leader? Why was he the leader? How chosen? How could a fellow get into your crowd? What did you do to a fellow when he came in? Did you ever put a fellow out? Why? How long have you fellows been going together? Who started the gang? What did you do for fun? Summer? Winter? What did you do nights? What did you do Sundays? Did you go off anywhere?

[1] I am indebted in this study to many suggestions and helps by Pres. G. Stanley Hall and Mrs. E. Hope Puffer and to the boys of the Lyman School for their co-operation.

How? What did you do that was unlawful? Did you ever plague anybody? Did you ever have any fights? Did your crowd fight any other crowd? Did any of you work? How many loafed? How many went to school? Did you have any rules? What? How did you get your money? How did you spend it? Did any of the boys drink? Smoke? Did you play cards? Gamble? How? Did you run away from school? Why? How did you settle disputes? How did you treat girls?

Definition of Gang. (1) The boys' gang may be defined as a number of boys who go together, and because of their mutual sympathy and friendship will stand by each other.

The Gang a Social Institution. The boys' gang is not generally reckoned with as of any great importance among social institutions. It does not generally come to the notice of the casual observer unless it is in connection with some mischief or crime perpetrated, and then the boy is generally reckoned with individually without regard to the gang, but it is a common sight to see a half dozen boys on the corner snowballing a passer-by. No one of the boys is to blame for the snowballing for no one of them alone would have dared to trouble the person; the gang as an institution is to blame. This simple instance typical of a hundred, illustrates the relation of the individual to the gang group.

Of one hundred and forty-six boys studied in this school, one hundred and twenty-eight went in gangs (reckoning three a gang). In Sheldon's (12) study of the spontaneous activities of American children, out of 1,034 responses, 851 were members of gangs. It is safe to say that three out of four boys belong to a gang. The gang is therefore a common social institution and is responsible for many of the activities of a boy.

Size of Gang. In sixty-six gangs there were 651 boys. This makes an average of a little less than ten boys to each gang. No company of boys was studied less than three, although two boys may form a company which serves nearly all the purposes of a gang. Of one hundred and forty-six boys studied in this school, two claimed not to go with any one, sixteen went with one companion and the rest in a company of boys, varying from three to fifty. In the sixty-six gangs studied were five gangs of from twenty to fifty boys. These few brought up the average number so that a normal boy's gang numbers from five to eight or nine. The larger gangs often split up into smaller gangs. There are nine records which show this tendency. The larger gang hangs around the corner while the smaller gangs split off to steal, play tricks, skate and fish.

Names of Gangs. (2) (11). The following are some of the typical names.

4. The Island Gang. 5. Medford St. Gang.
6. Dowser Glums. 8. Hick St. Fellows.
12. Arlington Gang. 13. The Club.
22. Bleachery Gang.
23. Bones St. Club. 24. Dirty Sixteen.
26. Green's Corner Gang.
33. Wharf Rats. (Meeting place a wharf.)
34. Eggmen. (Because we used to rob farmers.)
36. Spencer Ave. Crowd. 37. B. Streeters.
40. Willows.
42. Jeffries Point Gang. 43. Methuen Gang.
56. Liners. 58. Morse Hollow Athletic Club.
59. Jenhine Boys. 60. Gold Streeters.
62. Crooks.

About two-thirds of the gangs had names. Twenty-three out of the thirty-nine names used are taken from the street on which the gang meets. Nine more are given the name arising from the place of meeting as The Island, Wharf, Point, etc. The names Dowser Glums, Dirty Sixteen, Eggmen and the Crooks arise from the character and deeds of the boys.

Nicknames. Nineteen boys were asked for the nicknames used in their gangs and the reasons. Only one said that they had no nicknames. The answers show that boys are very fond of using nicknames and they get them from abbreviations of names, from some physical feature or peculiarity, or from some prominent trait of character. The following are characteristic.

No. 43. Called "Gulliver because he travelled so much. Spud because he was an Irishman. Puggie because he had a flat nose. Bull Dog because he stuck to it when he started a thing."

No. 46. Called "Giezer because he was an Italian. Crosseye because he was crosseyed. Bannex, a fellow at stable gave me the name."

No. 47. Called "Bob White because he whistled like a Bob White."

No. 48. Called "Black boy because he was a negro. Yellow boy because he had yellow hair. Chicken because his name is Henson."

No. 50. Called "Ginger Head because he had red curly hair."

No. 52. Called "Post Office because he gets fresh. Base Ball because he is a pretty fair fellow in playing base ball. Happy Hooligan because he is a happy-go-lucky fellow."

No. 55. Called "Bum. All the time hanging around the corner, never worked."

No. 56. Called "Couch. Used to go in long pants. Took them off again and looked like a kid so we called him Couch. Fung Lung because he never washed his face."

No. 59. Called "Joe Six Toes because he had four toes cut off."

No. 65. Called "Fat because he was so fat. Nigger because he was dark tan color. Scarecrow because when he was playing football he did n't dare get near the ball. Sheeney gave him that nickname because he made lots of fun."

There are eight nicknames abbreviated from names, Mick from Mike; Bobby from Robert; Nick from Nicholas; Dick from Richmond; Billy from William; Raffies from Raphael; Bossy from Bossfield; Sully from Sullivan. There are nineteen names with no reason given. Joker, Butcher, Bunch, Dinny,

Donkey, Jack and Doodle, Bum, Foxy, Hoagy, Rubber, Wiggy, Smuck, Dinso, Duffy, Barb, Popey, Bannex, Dusty. Fourteen received their names from some physical feature. Lefty, Nigger (2), Puggie, Spud, One-armed-crook, Crosseye, Bob White, Black Boy, Yellow, Couch, Ginger Head, Joe Six Toe, Fat. Eleven boys were named from some trait of character, Gulliver, Bull Dog, One-armed-crook, Chicken, Post Office, Base Ball, Bum, Fung Lung, Scarecrow, Sheeney, Happy Hooligan. It would be safe to assume that many of the following names classified under the unknown reason are given because of some trait of character, Joker, Donkey, Jack and Doodle, Bum, Foxy, Smuck. Three received names from nationality, Dutchy, Giezer, Spud. One inherited name from father, Chicken. One boy was called Quaker because he lived with Quakers for a while.

Age of Boys. The average age of boys studied was thirteen years and eleven months. The youngest boy was eleven and the oldest sixteen. The boys of the gangs studied averaged from twelve years one month to sixteen years three months. The youngest boy in the gangs was seven and the oldest was nineteen.

From Sheldon's (12) study of gangs it is seen that the period of greatest activity of gang life is from ten to fifteen years of age. 87% of the boys' spontaneous societies are formed at this time; 7% before ten, and 5% after fifteen. The boys studied at this school were mostly at this age.

Nationalities of Boys. The majority of the boys who come to this school are Irish and therefore the greater percentage of the boys studied are of this nationality. Out of the sixty-six studied, Irish 35 or 53%; Americans 8 or 13%; Germans 7 or 12%; French 6 or 9%; Italians 3 or 4%; English 3 or 4%; Negroes 3 or 4%; Scotch 1 or 1%.

In the gangs there are 362 boys of whom the nationalities are recorded in 47 different gangs. Irish 186 or 51%; Americans 70 or 19%; French 40 or 11%; Italians 21 or 6%; Germans 15 or 4%; English 14 or 4%; Negroes 6 or 2%; Poles 5 or 1½%; Scotch, Portuguese, Jews and Swedes 5 or 1½%.

From the nationalities of the boys studied the expected number of boys of the different nationalities are found in the gangs.

Nationalities are recorded in 47 gangs. Irish are found in 41 gangs; Americans 20; French 18; Italians 7; English 6; Germans 5; Poles 3: Negroes 2; Scotch 2; Portuguese 1; Swede 1; Jew 1.

As the boys studied come mostly from the densely populated parts of cities, they come from a mixed population of Irish, French, Americans, Italians and Jews. The other nationalities mentioned are not large in the population. The Jews appear

to be the only class excluded and they exclude themselves. Eleven only of the forty-seven gangs were all of one nationality. In more than the expected percentages of the gangs the Irish, French, Americans, English, Germans and Italians are found. These records show that the boys of different nationalities associate freely together and are unprejudiced and democratic in their gang life.

Location of Gang. Boston 17, Waltham 4, Lawrence 3, Cambridge 3, Lynn 3, Everett 3, Worcester 2, Lowell 2, New Bedford 2, Haverhill 2, Peabody 2, Chelsea 2, Newburyport, Springfield, Brookline, Brockton, Chicopee, Marblehead, Leominster, Revere, Stoughton, South Braintree, South Royalston each one.

Out of the fifty-six gangs only three came from country towns and only four from places less than 10,000 in population. This does not show that there are no gangs in the country towns but it does show that boys from country towns, whether they belong to gangs or not, are not often sent to a Reform School.

It is not safe to draw the inference here that the city gang is worse than the country gang for country boys are not arrested and brought to trial for the same offenses as city boys.

Time and Place of Meeting. Out of the fifty-four records, there are only seven gangs which do not meet every day. If boys are free from work and school they intend to be together all the time. Forty-seven met every day (seventeen say "by day," twenty "by night," two "morning, noon and night," three "every day and night," two "all the time" and three "every day after school"). Three met three times a week, two twice a week, and one once a week.

In records of sixty-three gangs all but four have regular meeting places. The four met anywhere. Seven gangs met in two different places and three in three different places. This leaves forty-nine out of the sixty-three which had one definite meeting place.

Out of seventy-seven recorded meeting places there are eleven records of gangs meeting on a street and twenty-seven records of meeting on the corner of streets. This means that about half of the gangs had their meeting place on the street or corner. There are four records of boys meeting in club rooms, and three of meeting in a house, but in contrast to this may be mentioned one in a shanty, one behind a barn in the woods, one in a house made of old barrels on back street, two in a shed, one in a hencoop, one in a club house in the woods, one in a tent in the woods, one in a tent in yard, one in a dug-out, one in an empty attic, one in the cellar of shed. This makes twelve instances of boys selecting places of meeting which are crude.

Boys do not like parlors. They do not prefer a nicely furnished room for their meeting place. The records of these gangs show that they select a street or corner, or an old shed, or coop for their place of meeting. It may be said that the boys are forced to meet in such places, but I think they prefer a crude place which they can fix up to suit their own tastes. Boys like to have a tent in the woods. Boys in country villages nearly all build camps in the woods at the gang period.

Ownership of Meeting Place. The sentiment in regard to ownership is best expressed in the boy's own words.

4. "Would n't let any gang on that street. Gave a strange boy a licking."
5. "Thought that Medford St., belonged to us. If a strange boy came round try to pick a fight with him."
42. "Fought with Elm St., gang and Lawrence toughs. Fought over the possession of a certain street."
45. "If another crowd came on our street have a game with them."
47. "Nobody came around there. Afraid of us. We would n't allow any gang to come around there. Kick a strange fellow away."
50. "Big fellows meet on same corner. They don't do any harm. Strange boy come around they grab him and fish his pockets. Take anything he has got. Insult any other gang."
51. "If a strange fellow came around, if he kept quiet, did n't do anything."
55. "Made a fort. Sewall St. gang, tried to take it away from us. We pelted them with snowballs."
56. "Allow other fellows on street, we could n't stop them."
59. "Tell fellow who came around to get out."
60. "No other gang came around. Every corner has a gang. Corner belonged to us."
64. "Let other fellows come around."
65. "Had that corner all ourselves."
67. "Another big gang met there. If we were there when they came we had to get off."

Twenty boys were asked the question "What did you do if other fellows came around your place of meeting? From the answers given it is plain that most gangs thought that the street or corner where they met belonged to them. The strange fellow or another gang were given an unpleasant reception.

Territorial Limits. By these records, which are typical, it is shown that the gang is a local affair. It has one meeting place and the boys come from the same street or district. A boy who moves around in the gang territory is allowed to come in if he meets the approval of the crowd.

4. "We all live on Lamartine St."
5. "Anybody moved around there, we thought safe to come in we would let in."
22. "If they lived down there, and fellows knew him, he could get in with them."
26. "Fellows all come from two or three streets. If he moved round there and wanted to join he could."

31. "Fellows who lived up that way could be in crowd."
33. "Came from down around the wharves."
40. "All but one lived on Willow St."
42. "All from one street and a little street off from it."
43. "All live on same street."
49. "Anybody who moved in Willow Park could come in."

Leader. Typical records selected from sixty-six reports are as follows:

1. "A—was the oldest and largest. He collected us and got us into it."
2. "T—was leader. English, good natured, good player at anything."
4. "J—was the ring-leader, steals most, says come on."
5. Three different leaders. "I was leader in making tent (pleasant, small, long-headed). L—was leader in stealing doves."
6. "No leader. All planned together."
7. "Three officers. Captain of ball nine, captain of football, and treasurer. The treasurer collected things at M—'s house."
9. "P—was leader. He was the sharpest. He always wanted to go first."
10. "President. Voted with paper. Six votes to elect Pres., changed every two months. Manager of ball team. Captain of baseball. The nine elected baseball captain. President read rules if we disobeyed, and held money. Manager got ball games."
12. "G—was leader. He gave you anything if he had it. Worse one in gang."
13. "I used to be leader. I was the smartest." (Bright and proud.)
17. "D—was leader. He could fight the best and had most money."
20. "H—was leader. Wanted to be leader. T—was the smartest but he did n't want to be leader but was leader some of the time."
23. "President, Secretary, Treasurer and three Selectmen. President reports disorder. Selectmen vote on fellows coming in or going out at club."
24. "I was leader. Good-natured, athletic. Had stumps and the one who could do most stumps would be leader."
28. "T—was leader. Oldest and smartest. Had more money. Had all the money he earned."
30. "I was leader." (Smart and active. Took pride in being the best fellow. Won the position of being best fighter in house.)
31. "D—was leader sometimes. Dare us to jump off from high places in swimming."
32. "No regular leader. One fellow propose a thing he knew most about and take the lead."
33. "No regular leader. H—I guess was leader. Thought he could lick anybody in crowd."
49. "R—was leader. Smartest fellow there and best ball player. Best skater. Highest grade in grammar."
50. G—was leader. Big stout fellow. He is always bringing a gang around him."
53. "O—was leader. He would chase everybody away. Lead in breaking and entering."
54. "B—was leader. Always lead and boss around. Kind of a head one over them."
55. "D—was leader. Pretty good fellow. Happened to choose him. Most daring fellow. Chose him by ballot. He got seven votes."
58. "A—was leader. One that could jump the farthest was made the leader. President jumped the farthest. V. Pres. jumped next the

farthest, Sec. jumped the next farthest. Treasurer jumped the next farthest. Club was for athletics so that was the way we wanted it."

59. "I was leader. I was n't afraid of anybody."

61. "Anybody that they wanted to be. I was once. Most all of them had a chance at it."

62. "S—was leader. He would run away from school and get us to go with him."

Number of Leaders. Of the 66 gangs 44 had one leader (66⅔%); no regular leader 8 (12%); two leaders 8 (12%); three leaders or officers 4 (6%); four leaders or officers 1 (1½%); six leaders or officers 1 (1½%).

Two-thirds of the gangs have one leader and one-third have more than one leader or officer. The gang often has different leaders for the different things to be done, and in a few instances there are two fellows competing for the same place as leader.

It is difficult to make a definite classification of leaders. Twenty boys evidently took the lead in everything and may be called all-round leaders. Twenty-four more are specified as leaders in playing, fighting, baseball and football and may be called athletic leaders. Twelve were officers, three presidents, one secretary, four treasurers, one a manager, and three selectmen, not all of whom are necessarily leaders.

It is interesting to notice the characteristics of their leaders as given in the boy's words. 14 said that the leader was the oldest; 13 that he was the largest; 13 best player; 10 best fighter; 6 wanted to lead; 6 was good-natured or generous; 5 smartest; 4 started games; 3 best stealer; 2 highest grade in school; 2 had most money.

Boys are hero worshippers and naturally follow the person who has the traits which they admire. The leader takes his place as naturally as the boys follow. Physical prowess wins him his position. The boys admire the fellow who is the largest, best player, best fighter, and has the courage and initiative to go ahead and do things. Good nature and generosity are admired by the boy and sought for in a leader. Ability as a student or social distinctions do not often count in the selection of a leader.

Election of Leader. In the records we often find such expressions as the following: "He collected us." "Got us into it." "Says come on." "Always wanted to go first." "He asked to do things." "Wanted to be leader." "Took the lead in stumping." "Made up the team." "Took the lead in the games." "He was kind of a head one around there." There are twenty-four such expressions which show that the boy took the lead. In four cases a boy was informally put in as leader and four more were elected by ballot. A formal method of election is therefore rare and in two-thirds of the

cases there is no election, but the boy takes his place because he wants it and the other fellows want him to lead.

At the McDonough School the same informality of leadership is recorded by Johnson (9). "At McDonough no president is known. Whoever is most influential takes the lead in dispatching the business of the moment."

Starting of Gang. The different ways in which gangs started are thus described by the boys.

1. "Leader collected us."
4. "All live on one street. M—started it. Asked us into the gang."
5. "When we first moved around there we gathered together and kept together all the time."
8. "I, leader, started it. It was cold standing on the corner."
23. "Boys started their own club. Stood out in cold. Talked it up, then chipped in and had a room."
34. "We used to hang around the corner and we made up that we would go together and nobody else should come with us."
50. "The leader started the crowd. Got a crowd around him."
54. "The leader in baseball started the crowd."
55. "Three fellows M—, D—, and I proposed having the club and we got the other fellows."
56. "The boys hung around the store and then they got into a gang."
59. "G—, the best wrestler started it. He wanted to make up a crowd to meet every night."
62. "Two of the boys started it."
63. "P—fellow, the leader, and I thought we would get a gang up."
64. "Used to go to school together, that's how we got acquainted."
66. "Another fellow, the leader, started the crowd. He moved away and then I got in leader."

As a rule the boys do not know how the gang started, for only seventeen could give any report. Of seventeen records of the starting of gangs, the leader started six, the leader and another boy started two more, a boy not the leader started one, two boys started one and three boys started another. The six remaining gangs came together by moving round there, meeting on corner, hanging round a store, and going to school together. It appears that more gangs are started by a leader than in any other one way.

Conditions of Membership. The entrance to a gang is usually informal.

4. "Didn't let anybody in after we started."
5. "Anybody moved round there we thought safe to come in let him in."
6. "Any fellow could bring in a fellow if others approved."
7. "If a fellow was a good ball player let him in, or an all round athlete."
9. "Tell them to come along with us. Have fun one night come right along."
10. "Put him on probation for a certain time. If he wanted to get in bad let him in. See if he plays ball good."
12. "If he was a good guy and round the corner every night, after a while let him in if he was not a squealer."

14. "When he moved on our street fellows bring him round. If he wanted to belong he could."
23. "Any fellow could recommend a fellow to Selectmen. They vote on him."
26. "Did n't care whether person belonged to crowd or not."
31. "Anybody who lived up that way could come into the crowd if whole gang knew him."
32. "New fellow. We would not have anything to do with him for a while. If he knew enough to keep still let him in."
35. "Anybody was welcome to join the crowd."
38. "Go down and hang around there, you could get in."
41. "Ask a fellow to go with them."
42. "If he came around to live there and if we thought he had courage to do things let him in."
43. "When one fellow went out let another fellow in. Get a fellow who would keep things to himself."
45. "Let him in on condition that he would not tell anybody. Keep his mouth shut."
47. "Would n't let any one in. We did n't want any one. We wanted to stay ourselves."
53. "Leader decided who could come in."
54. "Go around and ask fellows if certain fellow could come in. If most said 'yes' he could come in."
55. "Let in fellows the leader said would be alright to come in."
57. "Let anybody play with us. Would n't let him in to any other secret. Did n't let any one go with us on trips."
58. "Would n't let a fellow in unless he could play baseball or football."
59. "If any one voted against a fellow to come in he could n't come in."
60. "Let anybody in unless he was a squealer."
61. "If you knew he was n't a blower let him in."
62. "Would n't let a fellow in if he would tell on us."
63. "A fellow who was n't scared to do things let him come in."
64. "Leader decided who should come in."
65. "Would n't let anybody in crowd but us four."
66. "If he could keep secrets let him in."

Of these gangs 8 were exclusive; the others admitted on following conditions: if the new member was not a squealer, 9; moved into neighborhood and approved, 7; approved by fellows, 6; approval of leader, 3; because athletic, 3; because courageous, 2; formal vote, 2; because they wanted to come, 2; invited, 2; let any one in, 4.

These statistics show that forty out of the forty-eight gangs did not have to look for members. They allowed fellows to come in but did not go after them. The entrance to a gang is informal. In only two cases is a formal vote taken. In three cases it is seen that the leader had everything in his own hands, but generally the power of approval lay with the fellows in the gang. Forty of the forty-eight gangs are exclusive in the sense that they would not allow anybody to come in who so pleased, and eight are exclusive in the sense that they would not allow any one to come in on any condition.

Loyalty is the virtue which wins approval in eight instances, physical prowess in two, and courage in two.

Initiation. Out of forty-eight gangs only eleven report any form of an initiation. Five out of the eleven suggest that the boy had to pass through a probation period. The boys take the putting off attitude until they have tested their fellow to be sure that he is not a squealer and then have him give a pledge to keep secrets. There are but five instances where the boy receives a physical initiation. The following cases illustrate the usual methods of initiation.

7. "Sometimes pounce on a fellow and give it to him for two or three minutes."

10. "Put him on probation for a certain time if he wanted to get in bad let him in. A new boy had to pay ten cents a month for four months."

12. "If he was a good guy and round the corner every night. After a while let him in if he was not a squealer."

24. "Had to bring something (cigarettes) to make sure he would stay in the club. Had a dark hole, had a barrel half full of water if he would not go in, chuck him in.

32. "New fellow. Would n't have anything to do with him for a while. If he knew enough to keep still let him in."

42. "Punch and rapped him all over. Put him up in the air and throw him down for five or ten minutes. If he did n't cry let him in."

43. "Make him take an oath to keep secrets. Put him on a freight train and send him off alone to see if he could get back alone. One fellow sent to watch him."

55. "Make him sign his name and pay the dues, ten cents a week."

59. "Have him wrestle with Gibson to see if he was strong."

67. "See if he was trustworthy. If he could keep secrets. Try him first. Show him something that we stole. If he did n't tell let him in."

At the Springfield Training School this question was asked fifteen boys, age thirteen to fifteen, by T. J. Browne (1). "When a new boy comes into your set how do you treat him?" The answers were as follows:

(1) We initiate him. (2) Kindly. (3) Rough at first, see if he'll stand fooling. (4) Roughly. (5) Make him run the gauntlet. (6) Treat him well if he is the kind we like. (7) We generally make him run the gaunlet or take a good hammering from us. (8) Don't allow new boys in. (9) Dose him under the faucet and take his shoes and stockings off."

Five out of the fifteen answers suggest some form of a physical initiation. One gives a definite programme.

Expulsion. Out of thirty-eight reports of gangs none were put out in 17; but boys were expelled for squealing or spying in 10; for fighting when it was not right 3; in for bossing, failing to pay dues, getting fresh, making trouble, disobedience, would n't play ball or pay dues, running off when needed to fight, leader put him out, in one for each. It is noteworthy that ten were put out for squealing and one for running away. This makes eleven cases of disloyalty. The rest are not im-

portant. In only one case was there a formal method of expulsion. The following illustrate the reports in regard to expulsion.

4. "Never put any one out."
5. "If a fellow said he was going to leave give him a licking."
6. "Put a fellow out for spying or for telling anything about the club. Tell him we did n't want him and then if he did n't take the hint force him out."
7. "Tell a fellow he did n't belong there and he would leave."
8. "Put three out for bossing and running the place. Wanted us to buy a bed for them. Told them to get out."
9. "If he does anything and tries to get us into it we tell him not to come round with us."
11. "Put a boy out of gang for fighting when he did n't need to."
22. "Can stay in as long as he wants if he once gets in."
23. "Failed to pay dues for three weeks, put out. President reports a fellow for disorder, two votes puts him out. Once out could not come back."
26. "Put a fellow out once for fighting with another boy. The other fellow was in the right."
34. "Put one fellow out for getting fresh but he was back the next night."
41. "Put me out because I said one fellow did n't have spunk to play spunk the leader."
42. "Kicked one fellow out for telling on the others."
50. "Put a fellow out because he would always squeal on them."
51. "If he went against us call him a back biter. Chuck him out."
56. "Put a fellow out for squealing on them. Tell him to get out of the gang. Leader put him out."
58. "Put a fellow out because he would n't play baseball or take his share of expense."
60. "If a fellow told the cop what we were doing put him out. Tell him to get away, make him get away."
61. "Put two or three fellows out for squealing."
62. "Put a fellow out for spying. Told him not to come with us."
63. "Put him out because he would run off when needed to fight."

Rules of Gangs. The following rules or customs were given by the boys in answer to the questions: Did you have any rules, and why did you put a fellow out of the gang?

4. "If he lied to any of us fellows, called him a squealer. Call him a spy if he told on us."
5. "If a fellow lied to one of us fellows put him out of the crowd for a week."
6. "Put a fellow out for spying or telling anything about the club."
7. "Never allow a big fellow to pick on a little boy. We were against smoking."
9. "Stick up for one another. If one fellow does anything and tries to get us into it, tell him not to come around."
10. "Fined a fellow ten cents if he swore; five cents for chewing; five cents for smoking, and five cents for not trying to live up to the rules."
11. "Put a fellow out of gang for fighting when he did n't need to."
12. "If a fellow lied to a fellow of our gang we would snowball him. If he lied to a fellow out of the gang it was nothing to do with us."
16. "Helped each other out if we got into trouble."

23. "Had to be at work when he comes into gang, must pay his dues."
26. "Put a fellow out once for fighting with another boy. The other fellow was in the right."
31. "Kick a fellow out if he lied to us kick him out if he lied about us to fellows outside. Do nothing to him if he lied to defend us."
32. "If any two stole anything have to share it with the rest."
42. "If one fellow got into trouble all stand up for him. If a fellow told on us make trouble for him till he gets sick of it. Put a fellow out for telling a lie."
43. "If one of the fellows gets hit stand up for one another."
44. "Fight if boys did not divy up."
45. "Put a fellow out for telling what we did."
46. "Throw a fellow out for telling. We get mad if a fellow would n't divy up."
47. "Any one in danger we would all turn to and help him out. We never told anything on each other."
49. "Call a fellow a squealer if he told on the rest."
50. "All stand up for a fellow in trouble. Put a fellow out who told on the crowd."
51. "Kick a fellow out if he told on the rest. If they would n't do what the other fellows told them to do put them out."
53. "If they did n't share up a fight would begin."
54. "If anybody picked on one of our fellows, we would fight them."
55. "Stood by each other."
56. "Put a fellow out for squealing."
57. "We punched the life out one fellow, nearly, for telling on us."
58. "Members had to be there Wednesday and Saturday. Each boy paid equal parts for ball."
59. "We were all supposed to meet every night. If any other gang made trouble we were all to go."
60. "Make a fellow get out for telling the cop on us."
61. "Put two or three fellows out for squealing."
61. "If a fellow did n't divy up we start fighting with him."
63. "If a fellow squealed on us give what he wants (needs). Make it hot for him if he lied to us."
64. "Called me squealer for telling on the gang but I got back pleased with them again."
65. "Would n't let a boy in crowd if he stole. If a boy told on another fellow made him pay dues every week."
66. "No fellow ever told on us. One fellow was caught. He stayed in Charles Street jail three months before rest of us were caught."

Of the fifty-one rules reported by various gangs eighteen were against squealing, eight against lying to one of the gang, and eight required standing by each other in trouble. This makes thirty-four rules which stand for loyalty. A rudimentary justice is found in these rules. The principle is: "I stand by you, you stand by me."

Three rules were for "divying up" things obtained by any member of the gang, two for paying equal parts, and three were against fighting when unjust. Under all these rules is the idea of justice, and under the last a very high kind of justice.

Two rules required attendance, and one obedience to the

majority. Six might be classified as moral,—two of these against smoking, one against swearing, one against chewing, and one against stealing. Three of these were found in one gang.

These rules express the public opinion of the gang. In only one case could they be called a code of laws (No. 10). Although the rules are not written down they are strictly enforced. Expulsion is the common penalty.

The Gang a Permanent Institution. As only seventeen out of forty-six boys questioned could tell how the gang started, it is plain that a gang is not a short lived institution. Eleven of the number state that they had been in a gang five years or more, four for over three years, and two for two years, ten for one year or more, and nine for less than one year. Six said that they had been going together for a long time.

Settling Disputes. In answer to the questions: Did you have any disputes? How did you settle them? Responses like the following were received:

5. "If there was a dispute leader settled it. If two fellows were fighting for a thing we took it away from them and gave it to another fellow. In playing dice chuck the fellow out who made the dispute. Break up the game. Take the boys and go off and leave him."
12. "If there was any dispute have a scrap over it. One that got the worst of it give up."
13. "If we got mad we would n't go with each other for quite a while."
20. "Have a dispute as to who was the best fellow. Fight it out."
36. "I, leader, would settle disputes. I would say whether it was right or not."
46. "A fellow would n't share up so fought him."
53. "If he did n't share up a fight would begin."
56. "Fellow did n't want to play captain put him out and put another fellow in his place."
57. "Quarrel for five or ten minutes and then ask N—to settle it. We would be satisfied with what he would say."
58. "The officers would most always settle the disputes. Talk it over, get circumstances, then settle it."
60. "One of the bigger boys would settle it. They would stop the fighting."
61. "Give one of them a kick that would settle it."
64. "Settled disputes by fighting. I had a fight with M—. Neither of us licked."
65. "If we had disputes we would vote on it. One who would get majority to him we would leave it go."

Disputes were settled by fighting in 10 instances; by the leader in 3; by putting fellow out in 2; by a bigger boy in 2; by voting in 1; by officer in 1; by staying away from each other in 1; by an outside person in 1; and by kicking the fellow in 1. The most common way of settling disputes is by fighting, but the seven instances where the trouble was settled by the leader, by officers, a bigger boy, an outside person, and

by voting, show that a method of procedure aiming at justice is often adopted.

Treatment of Strangers. About twenty boys were asked how they treated strange fellows. There were the following responses.

4. "Give a strange fellow a licking."
5. "If a strange fellow came around try to pick up a fight with him."
47. "Nobody came around there. Afraid of us. Kick a strange fellow away."
48. "Anybody could go by there."
50. "Strange fellow came around they would grab him, fish his pockets. Take everything he has."
51. "If a strange fellow came around, if he kept quiet, did n't do anything. If he was silly throw bricks at him."
54. "Did n't trouble a strange fellow."
59. "Tell fellows who came around to get out."

Boys of gangs have little sympathy or regard for strangers and treat them as enemies. There are only a few records, but in five of these a strange boy was maltreated, and thirty-five of the records given later under the topic of Plaguing People can be reckoned as maltreatment of strangers.

Treatment of Girls. Out of the eleven records concerning treatment of girls five had nothing to do with them, and five more did things to plague them, by calling names and doing mean things to them. One said that he treated them all right. Here are not enough instances for any conclusion but the few records are in line with the conclusion of Sheldon (12) that boys and girls do not associate or organize together. They have no interests in common.

4. "Plague girls. Ask them for a kiss and things like that."
5. "We never used to think of girls. I don't know how to treat them. I never tried it."
12. "Treated them all right."
13. "We never used to go with any girls."
31. "They never go around with any girls. They never say nothing to them. Sis at them."
36. "Some of the gang threw kisses at them. None of my gang ever struck them."
62. "Sometimes do mean things to them. Swear at them. Fight them. Steal things of them. Call them names. Silks, Pigs."
63. "Treated girls rough. Did dirty things to them."
64. "Used to hit the girls. Pick on them. Get in fights with them. Plague them. Call them names."
65. "Never had anything to do with them."
66. "Never had any girls round where we were. Never had anything to do with them."

Activities of the Gang. The activities of boys in gangs are many and varied, and are hard to classify. They include the play, predatory (stealing), fighting, migratory, social and work activities. The play activities of games are classified as games which demand much co-operation and games which demand

little or no co-operation. Baseball, football and hockey belong to the first class, while the running games, swimming and skating demanding little co-operation are placed in the second class.

Games Demanding Co-operation. Out of the sixty-six gangs, fifty-three have records of games demanding much co-operation. Baseball is the most popular game. Fifty-one out of the fifty-three mentioning baseball; football stands second, thirty-six mention football, nine hockey, nine basket ball and six cricket. Baseball and football are without question the two most prominent games of the gang. Not only are they mentioned by the great majority of the boys but they are given the first place in their long list of games. Baseball was mentioned first by twenty-seven and second by fifteen; football, first by four, second by eleven and third by nine.

Many other activities in the gang life demand co-operation. The stealing activities are often definitely planned and one boy watches while the others steal, one boy engages the attention of the storekeeper while the other fellow takes things, or one boy plagues a man to get chased and another boy takes the man's goods while he is pursuing the boy. Fighting between gangs demands very active and courageous co-operation.

Games Without much Co-operation. 102 running games are recorded in the sixty-six gangs. Tag was played by 21; Hide and Seek by 14; Relievo by 12; Hoist the Sail by 8; Chase by 8; Run Sheep Run by 5; Leap-frog by 5; Kick the Can (bar) (wicket) by 4; Bull (deer) in the Ring by 4; Puss in the Corner by 2; Detective by 2. Hare and Hounds 2; Fox and Geese; Wolf; Lion's Den; Hit the Bear. How many Miles to Bareberry? Cops, Blind Man's Bluff, Throw the Stick, Fire, Stump the Leader, Hill-dill, Snap the Whip, and Duck on the Rock. Policemen were each mentioned once.

By these records it is plain that the running games form a very prominent part of the gang life. In games such as Relievo, Prisoner's Bar, Run Sheep Run, where sides are chosen, there is some co-operation; but these games are mainly individualistic rather than co-operative. The individual is not compelled to sacrifice himself for the sake of the group.

Other Activities Without much Co-operation.. Of the sixty-six gangs swimming was mentioned by 45; Skating by 20; Coasting by 12; Snowballing by 7; Jumping, jump rope, by 5; Boxing by 3; Gymnasium by 3; Jumping cars and pungs by 3; Punching bag by 2; Bicycle riding by 2; Quoits by 2; Throwing rocks by 1; Driving horse by 1; Climbing by 1.

Swimming is almost as natural for a boy as for a fish. During the summer months a boy wants to be in the water every day and sometimes three or four times a day. Forty-five out of

sixty-six boys mention swimming as one of their sports. Twenty mention skating, twelve coasting, and seven snowballing. These are forms of activities which are social but demand no co-operation.

Predatory Activities. Under this head are placed the answers to the questions: "Did you steal? What? Where?" The following illustrate their character:

4. "Go to Worcester market. Steal apples, candy, grapes and peanuts. Went in a crowd."
5. "Stole pigeons. Broke into slot machines. Get lager beer Saturday nights off beer teams."
6. "Stole most anything they could get their hands on. Fruit from fruit stands, ice cream at picnics. Robbed a store and put it in an old barn, revolvers, knives, cartridges."
8. "At night wait and rob beer teams. Stole wine, beer, and a jug of gin."
9. "Steal cherries and any kind of fruit. Go into orchards and take them. Stole most anything we wanted."
10. "Broke into a freight train. Got tobacco, sold it to teamsters. Take waste out of hot boxes and have it for a torch."
12. "Went to Cottage Farms on freight after apples and pears. Got chased by mounted police."
19. "Stole money to go to shows."
20. "Hit a Sheeney. He drop his bag, another fellow take it. Get money in meat stores. Rob milk teams. Steal ice and sell it."
24. "Steal anything we could get hold of that is good. Steal it and keep it at club rooms."
27. "Steal coal to sell it to get money to go to theatre."
31. "Broke into store and then run away from home."
32. "Steal money out of tills of stores. Stole money. Would break in at places."
33. "Steal bananas off banana teams, apples, pears, and grapes from H—'s field.
34. "Steal off farmers' teams. Steal fruit off fruit stands. Steal coal and wood. Break and enter a bakery.
42. "Go after peaches, get the chase. Steal baskets and hide them. Steal iron and sell it."
44. "Broke and entered a bakery, fruit stands, and grocery stores."
46. "Steal ragman's bottles and sell them over again. Go into store and ask a cross-eyed man for something. He would go after it, then steal his stuff. Steal bicycles."
50. Sundays we used to go stealing apples and pears."
51. "Steal coal and wood and bring them down and build fires. Steal anything we could get hold of off fruit stands. Steal stuff off of farmers coming into city."
56. "Break into school building. Steal off from Baker wagon."
57. "Stole brass pipe and copper. Break and enter store. Stole candy. Went in after money. Stole fruit out of orchards. Got some off of fruit stands."
58. "Go into department store, steal air gun, base ball, foot ball. Stole apples."
60. "Go round stealing for fun. Go out to Arlington Heights for apples, pears and things. Take bananas off of Italians. Steal off bakers' teams. Take basket of doughnuts and pies. Take milk out of doorways. Steal clothes off of clothes line sell to ragman. Stole junk, sold it to another ragman."

64. "One fellow would steal while the other was buying things."
65. "Stole a watch."
66. "Get ice, steal it and sell it. Steal bottles and barrels and sell them.

There are forty-nine records of stealing in the sixty-six gangs. This rough classification is made. *First*, things stolen to eat and drink, including fruit, cakes, candy, beer, and milk. In this class are thirty records. *Second*, things stolen to play with and use, including air gun, balls, watches, knives, revolver, and hammer. There are seven records. *Third*, things stolen to sell, including tobacco, rags, ice, coal, wood, gloves, candy, fruit, iron, lead, brass, copper, bottles, and clothes. Fourteen records.

Over half of the records of stealing are for something to eat; fruit is found in twenty-five of the thirty records. These thefts may properly be called petty larceny. The records of stealing iron, lead, coal, wood, etc., to sell, are more serious, and the stealing of watches, revolvers, and knives to keep and use, seems still more serious. There are nine records of breaking and entering houses, cars, and stores.

The entire records show that the predatory habit is very strong in the boys in the gang, and in its mildest form is seen in the stealing of fruit, and in more serious forms in highway robbery and breaking and entering.

Fighting Activities. The boys were very free in answers to the questions, 'Did you have any fights? What for?'

1. "Make forts. Fight with snowballs. Go down to East End. Fight with a crowd there. Fight with fists."
2. "Fight with a crowd of French boys. Throw stones. Fight with air rifles."
3. "Used to make forts in field and have fights between ourselves. Put up fights with boys outside the crowd. If a fellow said he was going to leave give him a licking."
4. "Fought with another gang to see which was strongest. Fought with clubs."
8. "Used to go out fighting Saturday afternoons with mill companies."
12. "Have battle with snowballs. Had fights among ourselves over *out* and *not out*."
14. "Fight if any one swore about mother. Fight among ourselves over ball games."
16. "Used to fight Bleachery gang with fists."
20. "Some of them fight. One fellow think he can lick the other fellows, he think he can't so they start a scrap."
28. "Fight at any one who would swear at me. Had a shanty in the woods, other boys would come and tear it down, had a fight over it."
31. "Fight with Allen St. gang when they would squeal on us."
32. "Sometimes a fight among ourselves. On June 17 have fight with another crowd."
36. Chelsea gangs fought East Boston gang. Everybody thought that East Boston fellows were picking on little fellows in Chelsea too much. We had it all arranged but there was a traitor in our camp, he

told East Bostons. We met in middle of ice in Mystic River, fought with clubs, sticks and stones, about four hundred of us boys, same number on other side. We licked. One of our fellows got knocked out. Half of us got hit on the arms. The ice broke in on the river. A lot of our fellows pulled the others out. We did n't like to see them drown. One fellow on the other side got drown, a little fellow. In close quarters where we could n't use clubs used our fists.

37. "One fight with another crowd at a rally between two schools."

39. "Start a fight with a big fellow then all pitch in and fight him."

41. "Had a fight with Lawrence St. gang. Have fights among ourselves, general occasion. Put two fellows together."

42. "Had a fight with Elm St. gang, and Lawrence toughs. Fought over possession of a certain street."

46. "A fellow would n't share up so fought him."

47. "Build forts, fight with other gangs with snowballs. Fight with French boys who plagued my brother."

54. "Fight with High and Water St. gangs if they touched one of our gang. Fight with fists."

55. "Had a regular battle with Sewall St. gang. Make a fort on a hill. Sewall St. tried to take the fort on us. We pelted them with snowballs. They took it once at seven o'clock while we were eating breakfast. We drove them out over a fence."

56. "Fellows hit me with a brick. He knocked me down and I did the same."

57. "Fight about calling names."

58. "Met E—. We were coming home from football game. Guyed them for beating. Fired sticks on us. We made swords of wood, got an air rifle, made an attack on them and drove them up on a haymow in a barn."

59. "Polanders used to throw bricks at us. Had stone fights. One of our fellows got a finger cut off. One of their fellows nearly got killed."

60. "Our gang from our school fought a gang from another school. Fought with sticks and stones. Chased fellows on streets. Split a few boys' heads open."

There are records of fighting in forty-six of the sixty-six gangs. Twenty-two gang fights, six fights on sides in the gang, eighteen individual fights inside the gang, three fights picked up with a boy outside the gang, and one record where a group of gangs fought another group.

The gang fights were for the following reasons: for the fun of it, to see which was strongest, pick up a fight by guying other crowd, pick up a fight by throwing stones, for the possession of a street, for the possession of a fort, over tearing down a shanty, the other gang squealed on them, plagued my brother, touched one of our fellows, jealousy between gang of different schools, arranged for a fight the 17th of June. The group of gangs fought the other group because the small boys were imposed on. When the boys fought among themselves they chose sides and had battles with forts and snowballs. It is a common custom in the winter for boys of one crowd to divide for battles with snowballs.

The gang fights were fought with fists in three cases, snow-

balls in three more, stones in one, bricks and stones in one, air rifles and stones, and air rifles and wooden swords.

The individual fights arose over disputes in baseball in four cases, because boys did not divy up in three more; swearing about mother, swearing at me, calling names, money not paid back, put fellows together to fight and to see which was best fellow.

Fighting is a very prominent and important part of the gang life. The reasons given are sufficient, for boys at least, for a fight, and when the boys cannot find a good reason they guy or throw stones at the other crowd and thus give them a good reason.

It is thought by many trainers of boys that fighting is bad and should be universally condemned. But the boy who is taught not to fight when he is being imposed upon is trained to be a coward; and it is a safe inference that fighting develops physical courage, from which the highest kind of courage, moral courage is later developed. The gang fight is based on loyalty and demands the highest kind of co-operation.

Migratory Activities. These reports are in answer to the question: 'Did you go off anywhere?'

4. "From Worcester go to Tatnuck Sunday afternoons. Jump freights, other days, and go to Springfield and Pittsfield. Stayed out one or two nights. Ran away from home to Burlington, Vt. Stayed there two weeks."

5. "Go around in city of Boston. Wander around streets. Go to Revere Beach. Jump freights. Go down to freight yards. Go to Medford Hillside. Stay out nights."

6. "Sometimes went on a trip in the country on Sundays from Waltham. Catch a freight go to Wayland and Littleton. Went to Boston to shows and circuses."

12. "Take a car, go to City Point just for a little ride. Nice and breezy in cars. Go to Cottage Farms on freight from Somerville. Got back same night about one o'clock."

16. "Go off for a trip on Sunday (from Boston). Go out to Arlington, Waverly Oaks and Wayside Inn. Went to Portland, Me. Had a tent in woods for one month."

20. "Go out to Fair Beach from Boston. Jump freights. Was going to New York. Stopped at Worcester. Went back, was arrested at South Framingham."

26. "Sundays took walks to Lynn Woods and Breeds Pond. Some saved up money and went to Lewiston Fair in Maine. Some went to Boston to ball games."

28. "Go to Pittsfield to shows (from North Adams). Go on trolleys. Jump freights to Springfield, Worcester."

31. "Broke into a store and then ran away from home, so we would n't get caught. Went to Boston (from Newburyport) on freight. Stayed at Hawkins Street Home one night. Went to Worcester on freight. Stopped in a Park and Salvation Army in Worcester. Walked to Northboro to sisters. Stayed a couple of days. Went to Walpole and then back to Marlboro and was caught. We planned to go to Bangor, Me."

32. "Walked around streets. Stay out nights on the streets. Sleep

in barns. Go Sundays off to Charlestown and to fields out in Newton toward Norumbega Park. Go off to Boston for a day or two. Go round "North End gang."

33. "Sundays go down to the fort, go over to the Neck (Marblehead), go over to Lawrence woods on picnics, four or five miles."

43. "Stay out all night. Go off to different cities on freights. Went to Portland, Me., five or six times (from Boston). Stayed a week once. Went to Newburyport twice. Stopped one day each time. Went to Andover six times, stayed two weeks. Went to Exeter five or six times, stopped three or four days. Went to St. John, N. B. Got a job in steam laundry. Save up money and then go off for a good time. Go to Boston Saturday afternoons (from Lawrence)."

55. "Sundays went off bicycle riding out to Forest Hills. Stop at Jamaica Pond. Ran away to Worcester, stayed two weeks. Stayed out half a month nights."

57. "Take a ride out to Waverly or some other place Sundays. Went to Nashua, N. H., to get a job and came back again. Ran away from home to N. Y. with another boy. He paid the bills. Stayed there three months."

60. "Stay out nights three months to a time. Stay in cellars, freight cars and entries. Sundays go out to Dorchester and Arlington Heights to get apples and pears. Reason for staying out was the cops were after me. Jump freights to Readville and Providence. Get off, come right back."

62. "Stay out nights. Go in back yards and sleep. Ran away to Boston. Walked. Took four days. Got arrested there."

66. "Go to Newton and Arlington on bicycles. Go down to Apple Island in a boat. Stay out nights, stayed in paper office on Washington St. Lots of boys get there at one and two o'clock for their papers. When woke up say 'I am waiting for the papers.' Ran away from home several times. Get as far as Wellesley turn round and come back at night, say we would try it some other time."

There are forty-four records of the travel of boys. Some went only a little and others went much. Twenty-three records are of different boys jumping freights to go to other towns and cities. Some boys went but once or twice while others went twenty times in this way. Some went only to the next city while others went to Burlington, Vt., Portland, Me., New York and St. John, N. B.

There are three records of boys walking off to other places and four who paid their way on the cars. This makes thirty records of boys going to distant places. Fourteen records are of boys deliberately running and staying away from home, sixteen reports of boys staying out nights.

These accounts show that the travelling or migratory instinct is very strong in boys. As a rule they do not go away in large companies but by twos or threes. The custom of going off Sundays out into the country to some pond or woods is very prominent.

Savage Games and Occupations. These reports come in answer to the questions:—'What do you do for fun? Did you go off anywhere? What did you do Sundays?'

1. "Played Indians in the woods. Go fishing after perch and pickerel. Go berrying. Get a pail full, then eat them."
6. "Go fishing and shooting. Each of us had a gun. Played cards in the woods. Met out in the woods back of an old barn. Sunday went on a trip in the country."
7. "Went camping out. Stay for a day or two. Made a boat. Went boating, fishing for perch and pickerel."
15. "Go fishing. Had a tent in woods, for one month. Went boating."
26. "Go fishing. Go to woods on Sundays, to Breed's Pond. Build bonfires. Went hunting."
28. "Went fishing for pickerel and perch. Went hunting for gray squirrels, pheasants, quails, rabbits, foxes. Shot three foxes, one silver fox. Had a shanty in woods."
31. "Make boats and rafts to hold ten or twelve fellows. Twenty-three of us hired a tent for five days in woods in Salisbury."
46. "Went up to Cannibal Lake. Went boating. Go into woods on Sundays. Go fishing and hunting. Two boys had guns. Go shooting birds and bull's eye."
51. "Had rifles. Go hunting after birds in the woods. Had sling shots to kill sparrows."
52. "Play Harry Tracy. Two or three of us run, two or three detectives try to catch us. Use sticks for pistols."
58. "Play Indians. Make up two parties. One party captures others and put them in a hole. Met in a shanty or club house in the woods."
59. "Had a tent, a dug-out, a quarter of a mile out in the woods. Stayed out five nights. Slept in a barn. Two other fellows stayed away from home with me."
65. "Hire a boat Sundays and go down to Apple Island. Go fishing."

Under this head I have placed hunting, fishing, boating, building tents, camping out, going into woods, playing Indians, etc. Under this topic might well be placed the fighting, migratory, and predatory activities, for they are the occupations of savages.

There are thirty records of boys going into country to pond or woods, to hunt, fish, camp out, get nuts, fruit, etc. Sixteen went fishing, eight camping out, seven hunting, and eleven boating. There are seven records of boys meeting in a shed, dug-out or tent in the woods. For city boys these records show a strong tendency to get to ponds and into the woods and engage in the occupations of savage life.

Plaguing People. These responses came partly in answer to the question, 'What did you do for fun?' and partly in answer to the direct questions: 'Did you ever plague anybody? How?'

2. "Rap on doors. Push and pull people. Play tick tack on windows."
4. "Put wires across sidewalks to trip people."
8. "Throw eggs at people. Open doors of Chinamen and throw stones at them. Tie dead rats on coats of people."
20. "Have a dead rat. Throw it at a Chinaman. Fire things at men

to get the chase. Hit men out of doorways to get the chase. Put a rock in paper bag for men to kick. Hit a Sheeney. He drop his bag another fellow take it."

24 "Cabbage stump night. Take cabbage stump. Bang doors at night. Gate-night. Pull of the gates. Door-bell night. Tie long strings on door bell, ring it. Press buttons. Put pins in them."

25. "Pile things up at doors. Trip up drunks."

29. "Bang rocks at Chinamen. Go into stores and throw things around."

31. "Ten or twelve went breaking windows."

36. "Mock a policeman on duty. When he would turn his back hoot at him."

39. "Tie a rope across the street and trip people up. Throw eggs at people. Throw cabbages at people. Ring door bells. Break windows, electric lights. Plague Chinamen. Bring them in a bundle of paper. Throw potatoes at Chinamen."

40. "Plague people. Throw things at Jews. Throw snowballs at Jews. Ring door bells. Call Chinamen names, as rats, rub your teeth at them."

42. "Call person names to get the chase. Throw eggs in at Chinamen's doors. Plague policemen."

43. "Plagued the ragman. Upset his cart and run away with the rags. Ran away with the banana team."

46. "Dump ragman's cart over bank. Shoot at them with air rifles. Go into store, ask a cross-eyed man something. He would go after it, steal his stuff."

50. "Call women names. Tie strings to two posts when man would walk by knock off his hat. Plug potatoes at anybody. Hold up a ragman, take his money. Did n't fight but always insult another crowd when it came by."

51. "Go down near an iceman just to plague him. Tipped over a ragman's cart almost killed him. Burn the door on the Chinamen. Go out and plague farmers. Throw bricks at a man's horse."

52. "Plug snowballs at Jews because they are so funny. Tie strings to corners. Throw stones thro' window. Plug bricks at people."

53. Rap on Mr. G—'s door. Get something to hit every ragman you see. Run down into C—'s cellar."

54. "Plague policemen. Shoot beans and pebbles down on him if he touched one of our fellows."

56. "Throw bricks at Sheeney for fun."

57. "Plagued Chinamen. Called them names. Plagued Jews. Holloed what he would hollo."

59. "Go around banging doors and breaking windows. Went into the brickyard to get chased by the man there."

60. "Plague Jews and Italians. Tip the rag teams of Jews over, take the rags and sell to some other Jew."

63. "Play tick tack, pull blinds off of windows, smash doors of Jews."

64. "Go round in woodyard, throw wood in street to get the chase from an old man, Mr. B."

65. "Pull rag bag off of ragman and then run."

66. "Make a fire, get bricks hot, then throw them at Chinamen's door. Put pins in door bells. Throw corn cobs and potatoes at people."

There are forty-four records of this kind of activity with fifty-nine different instances classified as follows:

Tick tack, rap on doors, ring bells, take off gates 17; Call

people names, saucy, 7; Destruction of property, break windows, doors, etc., 7; Push, pull and trip people 6; Throw things at people, snowballs, potatoes, eggs, rats, stones, etc., 18; Robbing, tip over cart and steal 4.

The ringing of door bells and playing tick tack is not necessarily very serious; for it may be done as much for fun as for doing something for bothering other persons. The calling of names is more serious and the destruction of property in breaking windows and doors is still more so. There are twenty-eight records left which are personal, and are very serious forms of plaguing people.

This form of activity arises for many purposes. The boy often wants to have some fun and he takes this way of getting it. A boy likes to smash and break up things. He likes to tease and bother people. It shows a lack of sympathy for the other fellow, but this is one of the prominent traits of the growing boy.

Work. By the boys' own reports we find that there were frequently loafers in the gang, and quite a few boys who ran on errands, did odd jobs, and picked over the dump. The majority were at regular work or at school. The boys seem to think that going to school means that a boy is not expected to work. I would ask if any of the boys worked and the reply would be, "They go to school." There are a few very interesting answers where the boys report that they worked for a while, then stopped and spent the money earned. In another case the boy who worked went home at night and did not go stealing while the others did. Concrete reports follow.

"Nearly all worked. Three of us didn't work. Get money from junk."

6. "Some worked in mill, some on farms, some at odd jobs. Work for two or three days and then lay off and spend money."

8. "Four out of the seven worked. I worked once in a while."

13. "Get money from picking rags and bottles."

14. "Four went to school, four at work in shoe shop, three loafing."

20. "Four worked, one loafed. Three worked in barrel factory, one fellow ran on errands."

24. "Peddle bills for shows. Help men unload things at Express Office."

26. "Most at work in shoe factory and electric lights. One or two loafers. Five went to school."

29. "Clean horse for a man and got twenty-five cents."

32. "Three worked. They would go in at night and not steal. Four loafers. Three or four would go stealing."

38. "Five or six worked over to News Bureau. Stay till they got fired. Five loafers now."

39. None at work. Go to school. Stay away from school."

42. "Three of us worked, three went around getting junk to sell."

46. "I only worked. Rest went to school. Get junk out of dump. Sell it."

47. "One worked rest go to school. Get money selling papers, running errands, picking over dump."

52. "I worked blacked shoes. All rest went to school."

Theatre, Cards, Smoking, Drinking. There are records of going to theatre in 38 gangs; of playing cards in 25 (Forty-five 10, Whist 7, Pitch 7, High Low Jack 6, Casino 4, Polka 3, Old Maid 1, Everlasting 1, Barn-yard 1); of gambling in 12; of smoking in 30; of drinking in 9.

Boys are very fond of going to shows. It is one of their strongest passions. They will do anything to go: pick over dump, peddle bills, steal money or steal their way in. They are bound to get there someway. Thirty-eight out of sixty-six boys went to shows. They do not as a rule go in gangs but in companies of twos and threes.

Twenty-five out of sixty-six gangs report card playing; twelve, gambling.

There are records of smoking in thirty gangs and of drinking in nine. The records do not claim to be complete; if they were smoking would probably be found in nearly all and drinking in a few more. Drinking is not, I think, common in boys' gangs.

SUMMARY OF ACTIVITIES.

Athletics.	Games of co-operation	in 45 gangs.
	" " running	" 31 "
	Swimming	" 42 "
	Skating	" 22 "
Fighting		" 45 "
Predatory Activities		" 43 "
Plaguing People		" 45 "
Migratory Activities		" 41 "
Savage games and occupations		" 49 "
Going to theatre or shows		" 36 "
Playing cards		" 26 "
Smoking		" 23 "

The records show that the activities of a gang are varied and significant. The gang has its existence for the purpose of doing something. Athletics including baseball, football, the running games, swimming and skating forms by far the larger part of the activities. Play and fun is therefore the main purpose of the gang. Fighting, stealing, travelling, plaguing people and going to shows, fills out a very attractive and interesting programme for the gang's day or week.

Genesis of the Gang. If the gang is and will continue to be one of the important institutions of American boy life it is interesting to note how far the records give us any light concerning its genesis.

We have observed from Sheldon's study that the prominent period of the gang in a boy's life is from ten to fifteen, the

time of change from childhood to adolescence. Man is a social animal; and at this period the social instinct is beginning to assert itself and and control the boy's life. The fact that at the dawning of adolescence boys are eager to associate in gangs shows that there is a growing desire for the satisfaction of this instinct, that the boy's nature demands companionship.

The growth of the social instinct is also seen in the games played. In infancy the plays are individualistic, in childhood the plays begin to be social, but "the centre of interest is one's self in relation to others;" in adolescence the play reaches a higher social level, and the games "involve not merely the sub-ordination of self and the elevation of the group; but the pursuit of a distant end by means of definite steps." (7).

Most persons like to associate with other persons who are passing through experiences similar to their own. We associate with persons who are like ourselves. For the same reason, the boy desires to associate with beings like himself. He therefore likes to be with boys of about his own age and after a short acquaintance they begin to have a feeling of sympathy for each other, and unite informally into a gang.

The gang period is the time when a boy is learning himself.

> "But as he grows he gathers much,
> And learns the use of 'I' and 'me,'
> And finds I am not what I see,
> And other than the things I touch."

When the boy is coming to the realization of himself he has not much independence, nor confidence in himself. He needs some one to lean on. His boy companions afford the sufficient prop for his lack. Jacob A. Riis likens the boy of this period to a wolf. "His instincts of ferocity are those of the wolf rather than the tiger. It is only when he hunts with the pack that he is dangerous." (11)

These records and our daily observations show that the activity of boys at this period is prodigious. The normal boy is full of energy and there must be opportunity for its expenditure. Enforced inactivity is simply punishment. At home and at school the boy is required to keep quiet. The street and the gang afford about the only opportunity for free activity to the city boy. The gang therefore naturally arises from the instinct of activity which is so prominent in the boy's life.

Many of the activities of boys to which we are inclined to ascribe an evil motive arise solely from the desire to be doing something. When boys throw things at people and pull their coats, they do it not alone for the sake of bothering people, but for the purpose of getting the chase. Judge Lindsey (10) says, "In my experience nine-tenths of such offenses (against civil authority) are rather the result of misdirected energy,

thoughtlessness, and a certain uncurbed exuberance which is the part of the life of every boy."

The records show that the boy of this period has a strong instinct to fight. The struggle for existence has tended to select the men who are the best fighters. This passion seems to be stronger in youth than in later life and apparently is normal. The very slightest offense will arouse this combative instinct. If offenses do not arise there are times when the boy will do his part to cause them. The gang affords opportunities for personal fights and also for gang fights.

The boys show a strong instinct to roam. "The emotional restless disposition which is so closely associated with rapid and uneven growth, the new sense of power, and of self-life, and dreams of adventure, is often manifested in a craving to roam, to run away from home, to go to sea." (8) The parents of the boys have reached the stage where the home instinct is stronger than the roaming instinct. Moreover most parents are so confined by their work that they have no opportunity to go with their boys to satisfy this craving. The only avenue left open to the boy is the street and companions who have like inclinations. Thus the gang satisfies another strong instinct of the boy's life.

Again the instinct of curiosity is very strong in youth and is never fully outgrown. The boy is just learning about himself and the world. He desires to know the reasons for everything. He is fond of new experiences. "Youth loves intense states of mind and is passionately fond of excitement." (8) The experiences of the home become old and monotonous. The school work also has too much sameness and the daily routine becomes wearisome. The street and a crowd of enthusiastic companions affords the best opportunity for the satisfaction of his life.

It looks very much as though the boy had an instinct to steal. The records of these boys surely indicate this. It is easy to say that they are abnormal in this respect, but does not this instinct exist to a greater or less extent in the life of every normal boy. The careful training of wise parents may check it in very early years, but the boy without restraint is not thus saved. Who that is honest and not so pious that he has erased the past can fail to remember that the passion to steal was once a part of his own life. It is true that many boys enjoy a thing more if they can steal it, than they do to receive it in a formal lawful way. The association in a crowd affords the best kind of an opportunity for the development and satisfaction of the predatory instinct.

The gang therefore arises from the following instinctive tendencies of a boy's life,—the social instinct, feelings of depend-

ence, the instinct of activity or workmanship, the combative instinct, the instinct to roam, the instinct to learn, the love of excitement, and the predatory instinct.

Gang like a Savage Tribe. The boy is very commonly called a young savage. Warner (14) says "Any boy who is good for anything is a natural savage." "The child," says Ellis, (4) "is naturally by his organization, nearer to the animal, to the savage, to the criminal than the adult." If this view of the boy is truth rather than fiction it may be helpful in the understanding and education of the boy. "Without knowing them (savages) and their ways," says Pres. Hall, "we cannot understand children, religion or education, our own earlier history or that of our institutions." (8)

The boy's gang seems to have many points in common with a savage tribe. As Gulick says: "Savages who have reached the stage of co-operation under a chief, of fighting in organized groups, are doing that which the Anglo-Saxon boy commences to do soon after he is twelve."

Most savage tribes migrate. They wander from place to place. They are ever in search of better lands. There are records in thirty of our sixty-six gangs where the boys jumped freights, walked or paid their way to distant places. In fourteen cases the boys deliberately ran away from home. "At the dawn of adolescence the impulse to migrate or wander shows a sudden increase." (8)

Savages live in dug-outs, tents and rude houses. The boys show a great love for out-door life and wild rude life. The meeting place of a boy's gang is generally on the street. Very few show any inclination to go into well furnished rooms even in winter. There are but seven records of gangs meeting in a house or club room; but there are twelve records of the meeting place in tents, sheds, attic, and dug-out. At the Springfield Training School twenty-two students relate that they built shanties in the woods, or had their meeting place in a barn or hen coop. (1) Country boys have a better opportunity to show the tent building instinct, and at the gang period nearly all have a tent secreted in the woods. Savages obtain their living by hunting, fishing, grazing, and simple agriculture. The records indicate that boys have a strong passion at the gang age to enter into these first hand relations with nature. We have seen that thieving, plundering, pillaging, fighting, and the like, are common in the boy's gang as well as in the savage tribe.

Savages are cruel, and maltreatment of persons outside of their own tribe is admired. "Most savages are utterly indifferent to the sufferings of strangers or even delight in witnessing them." (3) The boy does not fall behind the savage

in the unkind treatment of strangers. The numerous records of the maltreatment of Jews and Chinese by the gangs shows the display of this tendency. To attack and misuse a strange boy who appears in the gang's precincts is also considered the proper thing. The boys get their pleasure by giving displeasure to others. This shows a great lack of sympathy and cruelty arises from this.

The savage tribe has the sense of possession of the territory which they occupy and will fight to hold it. The boy's gang likewise has a feeling of ownership of their meeting place and the district from which the boys come. The same spirit is reported at the McDonough School. "Among the McDonough boys, as among many savage societies, the beginnings of property in land is seen as the collective ownership of the soil by groups of persons." (9)

The leader of a savage tribe gains his position by physical prowess and a record for courage and ability in fighting. The leader of a boy's gang gets his position in the same way. The boys like as their leader the oldest, largest, smartest, good-natured fellow, who is the best player and best fighter. The boy with these traits of character naturally takes his place as leader.

The less civilized a people the more informal are their methods of procedure in selecting officers, or making laws and customs. The gang is thoroughly informal. The boys meet because they chance to be in the same neighborhood. A boy comes into the gang by common consent and goes out because public opinion is against him. The leader takes his place because he wants to lead and the boys want him to lead. There are no written rules and rarely is anything done in any formal way.

The virtues most admired in the savage tribe and the gang are the same. Courage is placed by both in the highest rank because the man or boy with it is of the greatest service and is most faithful to his tribe or gang. Truthfulness, fidelity, and loyalty to the tribe were necessary for the tribe's existence and therefore were greatly admired.

We find that the possession of these virtues are the conditions upon which a boy is admitted or expelled from the gang. Loyalty is the leading unwritten rule in the gang's code of laws. No other institution insists so strongly upon this virtue.

The self regarding virtues of chastity and temperance have never been esteemed by savages. In the gang records we find no reference to them. But six of the fifty-one rules have any reference to the morality of the individual. On the other hand treachery and cowardice are intensely hated by both tribe and gang.

The similarity of the gang to the savage tribe is so evident that no comment is necessary. One does not have to select or exclude any part of the records to find the parallelism.

Virtues and Vices Cultivated by the Gang. The gang is a democratic institution and therefore cultivates a free social life. No nationality is excluded. Jews are not found, but the Jews are the persons who keep themselves aloof and do not mix freely with boys of other races. Later in life man becomes undemocratic. He chooses a clique of about his own wealth or culture; but the boys make no such distinction. I asked several questions along this line and found only one or two who stated any dislikes; but most said "anybody could come in."

The gang life tends to develop a strong physique. The very purpose of the gang is to do something. The games and plays represent a great amount of activity and develop physical power and endurance. The migratory activities, hunting, fishing, skating, swimming, running games and the co-operative games of football and baseball develop the large muscles which control the fundamental movements of the body.

The gang life also develops courage. The games of football and baseball demand courage. The boy without courage dare not stand up to the bat against the boys who throw swift balls, and the fellow who is afraid to get his shins kicked or a bloody nose has no place in football or in the gang. The boy who is afraid to fight is a social outcast. In twenty-three instances there were regular gang fights. These fights call forth a very high degree of courage. The little fellow must stand his ground against the big fellow and fight.

The gang teaches the rudimentary elements of justice. Thirty-four of the unwritten rules stand for loyalty. The virtue of loyalty is based upon justice. "I stand by you, you should stand by me." Eight rules are directly concerned with justice, and three of these stand for a very high kind of justice.

It teaches also the subordination of oneself to the crowd. The fellow who thinks he is going to have his own way in the gang will be disappointed. The leader himself rules more by suggestion than by bossing and he finds that he cannot always have his own way. Here then begins the social virtue of regard for others.

The gang puts foremost the virtue of fidelity and loyalty. The boys find out whether they can trust a fellow before they let him in. They pledge themselves never to tell on the other fellow. One who does tell is immediately expelled from the gang. There is no institution on earth which can take its place beside the gang for the cultivation of this virtue of loyalty to the group. The church is often noted for its opposite tendency. In secret societies there are members who will betray their fel-

lows, but it is rare that a member of any length of standing in the gang will go back on his companions.

The gang life cultivates the virtue of obedience to a leader. The boy who will not obey the captain cannot play the group games. It develops also another of the highest virtues, self-sacrifice. No boy can enter into the co-operative games without the spirit of self-sacrifice. Baseball and football are impossible without this spirit. When it comes to a gang fight, then is the call for a heroic self-sacrifice. The fight is not for personal ends but for the honor of the gang. There is one record where the gangs of one section of the city united in a general fight against the gangs of another section, for the general good of the community, namely, the protection of the smaller boys. On the other hand the gang cultivates lawlessness. The boy has not reached the stage when he can be left free to his own impulses. As we have seen the lawless impulses are prominent. When a number of boys with the same impulses get together, away from the restraint of any older person, there are sure to develop bad tendencies. The policemen, Chinamen and Jews can bear good testimony to this statement. The records show this beyond dispute. The two directions in which lawlessness develops are stealing and plaguing people.

The gang does not develop chastity but rather its opposite. The boy of the gang is not noted for cleanliness of talk. Most boys, and the majority of men for that matter, are not very chaste in their conversation. The first suggestions of impurity are often received from the men who gather in stores and saloons and as they meet in their daily occupations. No boy has to search for impure thoughts, they are forced upon him. He does not acquire in his home or at school a wholesome attitude toward his own life and the life of others. And the gang receives the bad and lends a hand in continuing it.

The gang breaks to some extent the ties of home, school and church. It develops and encourages the spirit of staying out nights and running away from home. There were thirty cases of boys who went off to neighboring or distant towns. Thirteen of these state that they ran away from home. There were sixteen who stayed out nights. No doubt the association and talk of boys in gangs is responsible for a large part of these migrations from home. The list of virtues, however, far outnumbers and outweighs the vices which can be charged to the gang.

Gang and the Home. Of sixty boys studied in relation to the home, thirty-two had father and mother living (in two cases they were divorced), three had both father and mother dead, twelve had the father dead, and thirteen the mother dead. Boys without a home are in the gang most of

the time; and boys without any of the restraints of a good home, when they come together form a very lawless and tough gang. This is the reason why several boys from the same gang are often found in this school.

From the study of the boy's life in relation to the genesis of the gang it is evident that the home does not satisfy and perhaps cannot satisfy the normal demands of a boy's life. How can the majority of homes ever satisfy the demands of a boy's life? The father of the vast majority of the boys of our country belongs to the laboring class. He is away from home, allowing time for travel, some twelve hours of the day. When he returns he is tired and wishes to sit down and read, or go out into the companionship of men. He has no time or inclination to give any attention to his boy's life. The mother is busy caring for the smaller children; and the boy of the gang age is often more trouble than help and she is glad to be free of him. What other road is left open to the boy than to find life and excitement among his companions. It is true, of course, that the best place for a boy at night is in the home. The best place for the boys' gang to meet is in the kitchen or an attic of a shed. "A home without a good evening is a home without hope, and the way a boy's day ends at home is a prophecy of the way his life will end." There comes a time when the boy must enter into a world outside the home. It is an open question whether or not this acquaintance with life should begin in the gang.

Sunday is a great day either for or against the home. The boys show a disposition on this day to go off for a walk into the country; they like to go into the woods and be by the water. The boy had rather go with his parents and brothers and sisters to be alive with nature than to go with the gang. To spend a part of the Sabbath day out of doors, in God's ideal temple, seems to me as important as going to church and Sunday School, and I do not mean to underestimate the latter. Family walks and picnics on Sunday would do much to keep the boy within the influence of the home circle.

Gang and Boy's Club. The boys were asked: "What do you do nights?" In their answers nine say that they went to boy's clubs. This means a club organized and directed by adults. Two more went to Y. M. C. A. This means eleven out of sixty-six, or one out of every six, went to organizations formed by adults. Sheldon found that one out of four boys were in societies formed by adults.

It is difficult to get the boys from the tough gangs into the clubs; and if there they are not very satisfactory members. The boy's club is preferable to the gang, and at night the home is preferable to either. The ideal kind of a boy's club is a gang

guided by a sympathetic and wise man. In only one case did I find such a man leader of the gang; and in this case the boy reporting was frank enough to say that "if he had remained in that gang he would not have come to this school." It takes a very shrewd man to reach a gang. In the first place the man leader must have the characteristics admired in the boy leader. It is of no use for a man without courage and good nature and generosity to try to have anything to do with a gang. The leader must learn, like Wm. R. George, to be a member of the gang and to a certain extent to subordinate himself to the group. He can rule more by suggestion and by example than he can by domineering.

The ideal boy's club or at least the sub-division of it, for work and play should have boys of about the same age and from one locality, and be not more than ten in number. (For a thorough study of Boy's Clubs see the Boy Problem by W. B. Forbush.) (5).

Gang and the Boy's Education. A boy can be carried through this age of unrest without becoming a member of a gang or a club. It is possible to cultivate a tell-tale spirit in the boy so that he will not be acceptable as a candidate; but has not this boy missed a large part of his education?

The most valuable part of a boy's education is not what he learns from books but the elements of character learned in the home, in the school, and from his associates. The boy who gives most promise of a strong manhood, is a boy of robust activity, rough and ready, a boy who can stand a few bumps and not cry, a boy of courage, a boy with a sense of nascent justice so that he will not pick a quarrel with a smaller boy, a boy who is not afraid to fight, who is not a telltale, running to his mother or teacher with every little thing that happens, who has the spirit of loyalty to his fellow mates, who will tell the truth most of the time at least about his own deeds, a boy with pure thoughts and actions; a boy who has respect for his elders, especially the aged and unfortunate; a boy who is unselfish and will give the larger half of his apple to the other fellow. The education which develops these traits of character is worthy of the name. The training of the mind is valuable and necessary but it is nothing in comparison with an all round education in these genuine traits of character.

There is a very common tendency in educational work to set the boy at tasks no matter how dry and hard and uninteresting to fit him for the future; but the boy should enjoy his everyday life, and the more fully he lives out the present, the better he is fitted for the future. "Vigorous and complete development of each successive stage, depends upon the vigorous, complete and characteristic development of all preceding stages of life." (6)

If we accept the biological theory of life and are warranted in the conclusion that the boy of the gang period is passing through a stage in some respects comparable to that of tribal life in man's progress, then the education of a boy should have regard to the leading characteristics of this stage. "The education of the child must accord both in mode and arrangement with the education of man as historically considered." (13)

"The deep and strong cravings in the individual to revive the ancestral experiences and occupations of the race must be met in a secondary and vicarious way." (8)

Perhaps the reason why the country boy, although he has not the advantages of the best systems of book education, is proverbial for outstripping the city boy as he enters into the keen competition of the city life, is that at this gang stage he was led by his very surroundings to pass through more of the ancestral experiences. He is brought necessarily into a closer contact with nature. He is thrown more upon his own resources. He enters daily into some of the activities of primitive life.

If we were to be guided in the education of the boy by his interests we should seek first of all for much more activity in the schoolroom. Physical activity is the key note of boys' gangs and must be made the basis of the educational training; gymnastics, and out-door games, may be made instruments in reaching and holding the boy's interests, and under proper direction give the boy a valuable training. The boy who learns to be good natured in rough play, to obey accurately and promptly, to play fairly in an exciting game is on a promising road to manhood.

The gymnasium work and the out-door games can be made to appeal to the hunting instinct in games of chase, to the fighting instinct in games of contest, boxing and wrestling and to the co-operative instinct in baseball, football and basket ball.

Twenty-four boys were questioned about running away from school. They had all run away more or less. In only one case did the whole gang go. In one case the boys stated that they went in twos so that suspicion would not fall on the gang. It is plain that the boys run away from school in small companies and not in gangs.

The records show that boys run away from school to go to shows, play baseball, to go swimming or stealing, to go after nuts, and to watch men work. Eight boys say that they did not like school because they "had to learn the same things every day." "Did n't like to be in there sitting down." "Have to sit quiet as can be all day." "Have to sit in there all day." These answers suggest that the school work was monotonous. Two said that they liked school and five gave evidence that they were in trouble.

The boys love a free life. They want to have fun, to be doing something, and to be where men are doing something. They hate the monotony and inactivity of school. We cannot lay the blame for these feelings entirely on the gang. All boys with good blood feel this way. While there are only two cases of direct evidence, it is safe to infer that the gang fosters truancy.

The records of truancy given can be interpreted only as rebellion against the limitations of freedom, and unnatural methods of education. The majority of those who do not run away have the same impulses but the combined restraint of parents and school officers force them to subjection. In the spring every one who is healthy has a strong impulse to be out of doors, in the fields and woods. We "longed intensely for the utter abandon of a wilder life." These tendencies in a boy's life may be appealed to in picnics and excursions to historic places, in nature study walks, and in the camping-out school.

The boy has a raging passion for the theatre. Thirty-six boys out of the sixty-six mention going to shows. If the boy has an opportunity and a way of getting in he will go as often as opportunity presents itself. Five out of the twenty-four who were questioned about running away from school did so to go to shows. The boys often steal money and pick things out of the dump to sell in order to go to shows. Often the boys go out and try to reproduce the play. It seems from this that well selected plays might be used as a great power in the education of the boy. If simple plays could be acted out by the boys themselves, there could be no better incentive to memory work and good reading and speaking.

The boy should be led from loyalty to the gang to loyalty to a larger group. The loyalty to the gang should not be destroyed but broadened. He who has not taken the first step is not liable to take the second. A boy who is not loyal to his fellows seems to lack the fundamental virtue upon which righteousness is built. If loyalty is important and should be developed rather than destroyed, the present methods of dealing with boys are as a rule wrong. Parents and teachers often influence boys to tell on other boys. This spirit of the tale bearer is very injurious and should not be encouraged. Such a one is disloyal and lacks the very element in character which a boy most needs. Instead of fostering tale-bearing if the person who is trying to help the boys can get inside of the gang and has the confidence of the boys so that they will all come and tell their faults in one another's presence, ideal results may be obtained.

It was noted at the outset of this study that a boy will do things in the gang that he would not think of doing alone.

He should not therefore be corrected as an individual, but the whole gang should be dealt with if possible. The boy alone would not have been a thief or a burglar. The catching and punishing of one boy may sometimes effect reform, but more often it makes a hero of him and does the boy and his chums more harm than good. To deal with the gang for their good the laws of the gangs must be known and respected, and the man who begins in this way becomes a member of the gang, gains their confidence and enlists their help in stopping unlawful practices and thus the boys are led from their devotion to the gang to loyalty to a larger group and are started on the road to good citizenship. The work of Judge Lindsey, (10) of Denver, Col., and Wm. R. George, of the George Junior Republic, are good illustrations of this kind of work.

The Gang and Social Life. Is the gang an important aid in developing the social life of a boy or is he better off without it? The boy who does not learn to some extent the subordination of himself to others is always a social outcast. The member of the gang learns this lesson at the time when it is most easily acquired.

Again, courage is a social virtue, the most popular virtue which man possesses; and the man without it is despised. The activities of a gang develop this virtue in its members. The gang takes the awkwardness out of a fellow, teaches him how to give and take a joke, and gets him perhaps, too well acquainted with all sides of human nature.

It is doubtful if the boy who is brought up in the home and at school without the companionship of fellows of his own age can ever develop a normal social life. The gang or club or some kind of society where there is a liberal amount of freedom is necessary.

Mr. T. J. Browne (1) says in his study of gangs, "The boy who has gone through this stage of his existence without the discipline of the gang, without absorbing and experiencing those primitive virtues, without learning the lesson of self-subordination to the group, goes into manhood handicapped by an incomplete moral development and by a difficulty in correctly adjusting the balance between the interests of the individual and those of the group. And Pres. Hall believes that "every adolescent boy ought to belong to some club or society marked by as much secrecy as is compatible with safety. Something esoteric, mysterious, a symbolic badge, countersign, a lodge and its equipment, and perhaps other things owned in common, give a real basis for comradeship. This permits, too, the abandom of freedom in its yeasty stage, which is another deep phyletic factor of the social instinct." (8)

If a fellow enters college and has never been broken into some

gang or society, this is the time when the work of the gang may be done for him If he becomes a member of a secret society the initiation is the time when he must subordinate himself to the group. If he has grown so old and stubborn that he will not submit to others, he fails to become a member of the group.

In the gang there is cultivated a spirit of co-operation. This is seen in the games. Fifty-five out of the sixty-six gangs were engaged in the kind of athletics which demand co-operation. Baseball and football are the two most popular games. When boys were asked what they did for fun or sport, the answers signify that these two games were the most prominent. Not only are they mentioned by this large number, but they are mentioned among the first things in the long list generally given. Ball was mentioned first by twenty-seven, second by fifteen; football was mentioned first by four, second by eleven and third by nine.

Baseball and football demand the subordination of self, obedience to a leader, and self-sacrifice. The games cannot be played on the selfish basis. Even the fights call forth courage, co-operation and great self-sacrifice as every person who has been in one can testify.

Gang and the Religious Education. The religious life is a growth and there are essential elements which should be developed before the time of the gang. Habits of obedience, honesty, courtesy and reverence are basal qualities which can be taught early in life. But the special period for religious education is adolescence.

The games and activities which call for co-operation and self-sacrifice "form the natural basis upon which a life of service to others is built." "And further it is believed that this life for others is far more probable, natural and tangible when it comes as the gradual unfolding or development of that instinct that has its first great impulse of growth in the games of adolescence." (7)

Again, loyalty is essential to a healthy religion. The man without it is a hypocrite. "The boy who is not loyal to his group seems to lack the fundamental virtue upon which righteousness is built."

Gang or no Gang. The gang arises, as has been noted, from the natural instincts of a boy's life. The main purpose of the gang is activity. These activities develop a strong physical life. The gang teaches justice, self-subordination, obedience, courage, loyalty and self-sacrifice. It develops a freedom in social life and in some ways contributes to a genuine religious life. On the other hand it develops lawlessness, unchastity, and disrespect for others. It breaks to some extent the home spirit. It is often an enemy of the school and the church.

In the light of these facts should every effort be made to keep the boy out of the gang, and suppress and exterminate the gangs as far as possible, or is the wiser course to try to direct and control them, to eliminate their defects and make use of their good points? The latter course seems to me to be the better. Judge Lindsey, who was in very close and helpful relations to the boys' gangs of Denver, Col., says: "The gang has many good qualities. Its laws and rules are founded generally on really ennobling instincts. The gang should be wisely controlled and directed rather than suppressed." (10)

The limitations of the study are apparent. The boys studied come from a certain class of society, but surely the material is very suggestive and may provoke similar studies. I do not think that the gangs of boys studied differ in their general characteristics from any other gangs of country or city. For a parallel study of boys from another class the study made by T. J. Browne (1), in the Springfield Training School, should be consulted.

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THE HYGIENE OF HOME STUDY.

By Wm. H. Burnham.

Nearly twenty years ago, on the recommendation of Gen. Francis A. Walker and others, the school board of Boston passed the following order concerning the study of arithmetic: "Home lessons in arithmetic should be given out only in exceptional cases." And in an address on the subject of arithmetic in the Boston schools, President Walker expressed the opinion,—which may fairly be taken as the view of hygienists—that arithmetic is a subject peculiarly ill-fitted for home study, and he adds:

"Over and over again have I had to send my own children, in spite of their tears and remonstrances, to bed, long after the assigned tasks had ceased to have any educational value and had become the means of nervous exhaustion and agitation, highly prejudicial to body and to mind; and I have no reason to doubt that such has been the experience of a large proportion of the parents whose children are habitually assigned home lessons in arithmetic."[1]

If one asks a body of teachers their opinion in regard to the value and place of home study, some are likely to emphasize very strongly the importance of it; others, with perhaps equal emphasis, will say there should be none of it; and a third class will reply that under certain conditions a reasonable amount is very valuable. Teachers of classics are likely to say that it is impossible to do the work of the school without home tasks; teachers of science may say that there is need of little or no outside work. Writers upon pedagogy likewise divide into similar classes. Hygienists, on the other hand, generalizing from the experience of injurious results in certain cases, are inclined to condemn the giving of home tasks altogether. All are expressing merely personal opinion based upon limited observation and experience.

This is a case where it is desirable to know the facts before laying down general rules. It does not seem a problem that lends itself easily to experimental investigation; and yet here as often the method of experiment is valuable just because it enables one to study all the facts involved. Dr. Friedrich

[1] Discussions in Education. New York, 1899, pp. 239-240.

Schmidt,[1] working under the direction of Külpe and Meumann, has made this problem a subject of experimental study, and has attempted to get to close quarters with the facts that bear upon it.

First of all, it is useless to talk about home study when there is no home. In the large cities many of the children live in tenements where study seems to be hygienically out of the question. Statistics, for example, collected a few years ago in regard to Berlin showed that there were 25,769 cellars occupied as dwellings; 3,385 dwellings on the fifth story; 343 still higher; 560 ground stories with 175 to 200 tenants each; 154 with 226 to 250 inhabitants each; 110 with 301 to 350 inhabitants each; and 6 with a still larger number of people. Further it was reported that in 205,734 rear tenements there were 19,805 rooms that could not be heated. There were 1,749 common kitchens; and 112,114 common closets; altogether in Berlin there were 6,779 dwellings without heated rooms, in which 15,273 people lived. The climax of misery was represented by 4,086 dwellings which consisted only of a kitchen. In dwellings with only one heated room the number of inhabitants was 14,100. In each of 487 of these kitchens 3 people lived; in 250, 4 people in each; in 122, 5 in each; in 56, 6 in each; in 27, 7 in each; in 7, 8 in each; in 4, 9 in each; in 1, 11; in 1, 12.[2]

In some of the large cities of this country, a few years ago at least, the conditions were often just as bad; and in many tenement districts to-day the misery is perhaps nearly or quite as great.

Many other facts must be considered. Among the factors which will influence home study are the following: the place where the parents work, whether in the home or outside; the presence of brothers and sisters; the place where the home is situated, whether on the first floor, the middle stories, or the top floor; the condition of the home, whether heated or not; the location of it in relation to the street; the conditions of light, etc.; the time of day when the home work is done; the conditions of sleep, nutrition, pauses, interruptions; the use of coffee, tea, and the like; the general social environment of the child, etc. Dr. Schmidt has considered all of these factors, and in regard to many of them collected definite statistics. For ex-

[1] Schmidt, Friedrich: Experimentelle Untersuchungen über die Hausaufgaben des Schulkindes. Sammlung von Abhandlungen zur Psychologischen Pädagogik, I, 3. Leipzig, 1904, pp. 120. See also Meumann, E.: Haus-und Schularbeit. *Die Deutsche Schule*, June, 1904, pp. 337-359. Other references will be given by numbers corresponding to the numbers of the bibliography.

[2] See Gramse, Berliner Wohnungselend und Schularbeit, Päd. Zeitung, Vol. XXXI, pp. 976-978. Also quotation by Schmidt, *op. cit.*, p. 7.

ample, in the case of pupils in his own class he found that 12% of the fathers did their work in the home; 88% outside the house; of the mothers 80% worked in the home, 20% outside the house. 35% lived on the ground floor, 2% on the top story. 45% lived in dwellings of two rooms, 6% in one room dwellings.

Dr. Schmidt tried to control the conditions in his investigation. The following method was adopted: two tasks of as nearly equal difficulty as possible were chosen, one was given to the class, to be performed in school, the other was given, to be performed at home by the same pupils. After three weeks the same two tasks were given again to the same pupils. Also the same tasks were given to another class who had not had any home work previously. All the pupils were between the ages of 12 to 13 years. They knew nothing about the experiment. To avoid the effect of practice, work in which they were already skilled was given them, and it was adapted to their apperception; both tasks were allotted for definite days or hours. The teachers made no suggestions. Thus the conditions were normal. The material from all these pupils was made the basis of the study, and not only the average but the mean variation was calculated.

For a single illustration we may take the test in arithmetic for Dr. Schmidt's own class. The home work consisted first of ordinary examples in multiplication and long division. The total number of errors was for the home work 209.69; for the school, 146.51. For the test with the repeated task in the home work 222.63; in the school work, 137.88. Again, for a second test, the total number of errors in the home work was 351.57; in the school work, 268. For the repeated test in the home work, 260.31; in the school work, 218 95. Again, for the third test with applied problems the total number of errors in the home work was 248.38; in the school work, 199.44. For the repeated work, in the home tasks, 294.95; in the school work, 160.01. Summarizing the results for all the classes it appeared:

1. That in respect to content the home tasks were strikingly inferior to the reckoning in the school. As regards form one group of the school tasks showed more errors than the corresponding home work.

2. The mean variations in content and form appeared in favor of the school work in three cases.

Still more strikingly in favor of class work were the results of the test in copying, and in general the majority of the children made more mistakes in the home work than in the school work. The errors made in the home work differ, however, from those made in the class. The value of home work is dif-

ferent for different subjects and it is different for different ages.

A most noteworthy illustration was furnished by the test of writing original essays in the mother tongue. Those pupils who worked in the solitude of their own rooms, especially in individual cases, did much better work than those who wrote in the class-rooms. This, Dr. Schmidt explains on the ground that solitude favors the activity of imagination. Probably in general with children as with adults the conditions of solitude are necessary for the best results in original thinking.

On the basis of his extended investigations, Dr. Schmidt draws the following practical conclusions:

1. The investigation in regard to the quality of the home work showed that in general this was inferior to the school work. An inference in regard to the abolition of home work cannot be drawn from this, however, since in special cases the latter was qualitatively superior to the school work. The home tasks have in themselves an incontestible value.

2. The daily preparation of home tasks should be avoided, since it is shown that this is accompanied with a tendency to routine and superficial work, while such pupils as prepare no tasks at home show in a home test both in content and form better productions, which in a typical case may even surpass the school work.

3. In city schools with instruction both in the forenoon and afternoon, home tasks should clearly be omitted. The same is true for the winter schools in the country.

4. Written home tasks in arithmetic should be omitted, since their quality is inferior.

5. In case of home essays it is indicated that when it is possible the pupils should prepare them at a time when they can work alone. Such essays prepared in quiet solitude are qualitatively better than those done in the school under the influence of the class.

6. Home tasks to be given at intervals should be derived directly from the instruction, therefore well prepared for and most carefully controlled.

Some noteworthy incidental results were found by Dr. Schmidt. The experimental method used by him gave him an intimate knowledge of the individual pupils, their manner of work, and the errors to which they were liable. In correcting the home work of the pupils he came to know them accurately as working individuals; for example, he found that one pupil of the upper class could not write one of the German letters, another regularly gave a false result in the simple multiplication table, a third had a false idea of things, conditions, and qualities. He points out that it is not without value to know

the conditions under which each individual pupil works. The insight into the home conditions of the pupil is important not only for a correct estimate of the home tasks but for the treatment of the pupil in general.

This study by Schmidt illustrates very well the advantages and the limitations of experimental pedagogy in dealing with a question of this kind. It is impossible to eliminate all the sources of error, although they are minimized by the precautions that may be taken, by having a large amount of material, and by estimating not only the average but the mean variation; and yet the application of the scientific method is specially valuable as a means of studying the many factors involved in such a problem and bringing one to close quarters with the facts. The fallacy of the practical teacher who makes light of such work is in supposing that because the psychologist by the scientific method is unable to estimate all the factors adequately, therefore, the teacher without any such method is able to estimate them all. While from a strictly scientific point of view, the results of such a study are largely unsatisfactory, from a practical point of view they are far more valuable than mere personal opinion or even the pooling of opinions based upon desultory observation. The main point for pedagogy is that the work should be done by the pupils under normal conditions.

The child studying school tasks at home is relatively isolated; in the class he is one of a social group with common aims. Studies in social psychology have shown that an individual alone and the same individual in a group are two different psychological beings. The child working alone is different from the child working in a class. Dr. Mayer, of Würzburg (8), has studied experimentally this difference as regards the ability to do school work. His problem was to determine whether and under what conditions the work of pupils in a group gave better results than the individual work of the isolated pupil. He tested the ability of pupils to work alone or in company with others, using dictation, mental arithmetic, memory tests, the combination tests after the manner of Ebbinghaus, and written arithmetic.

Dr. Mayer's method was briefly as follows: a number of boys in the 5th school year of the People's school in Würzburg were given five different tasks as class exercises, and in addition each boy was required to prepare a similar task for comparison in which he sat alone in the class-room, only the class teacher or a colleague being present. The material for the tasks was carefully chosen and was familiar to the pupils. The pupils were representative of very different elements as regards school ability, behavior, temperament, and home conditions. The whole number tested was 28, the average age 12 years.

In general the result of the work of the pupils in groups was superior to their work as individuals. This appeared not only in the decrease of time but in the superior quality of the work done. In individual cases the saving of time was specially striking; for example, one pupil for a combination test required 10 minutes and 25 seconds when working alone, for a similar test when working with a group 7 minutes and 30 seconds; another, alone 13 minutes and 11 seconds, with the group 6 minutes and 45 seconds; another, 6 minutes and 52 seconds alone, with the group 4 minutes and 40 seconds; still another, 12 minutes and 48 seconds alone, 5 minutes and 50 seconds with the group.

In another series of experiments the pupils were urged to work slowly and carefully, "*Recht schön und langsam*," and given as much time as they desired. Here the stimulus from the group seemed to be lost. In only 41% of the cases was the class work done in shorter time. In the majority of cases the isolated pupils worked more rapidly. In another series they were told to work very rapidly, *Recht rasch*. Here again, only in 40% of the cases was the time shorter for class work than for work alone.

These results did not appear from similar experiments in vacation. When the directions were to do the work rapidly and well the favorable influence of class work did not appear. Class work in vacation was not done more quickly than the individual work. Mayer's explanation is that the ambition of pupils is the cause of the increased amount of class work, and this is not as potent in vacation, as the children do not then work for examinations.

The pupil in the presence of others is influenced by suggestion. First of all is the direct suggestion from the presence of the teacher in the class-room and the consciousness of the pupils that their performance will be compared with those of other pupils; but besides this there is an indirect, unconscious suggestion, using the word in the broad sense. Wherever men are together the individual is influenced by others without being aware of it. This is specially well illustrated by certain experiments in the laboratory. Meumann cites the case of a subject whose work at night with the ergograph had a very definite value. Accidentally one day he entered the laboratory, and at once the work done was decidedly increased in comparison with that of other evenings and this without the subject's making any voluntary effort to accomplish more. In such experiments the subject always attempts to do his utmost, and hence the significance of the increased work done in the presence of another individual. Many examples of such effect of suggestion have been reported by psychologists.

Dr. Triplett (20) tested the influence of the presence of a co-worker on a simple physical performance. His subjects were 40 school children, and he had them turn a wheel as rapidly as possible. The children turned the wheel now alone and then in company with another child; in both cases with directions to turn as rapidly as possible. Two results were noted. It appeared, on the one hand, that pupils work more rapidly as soon as another child works in combination; but, on the other hand, in case of many children, hasty uncoördinated movements appeared which reduced their performance. We have to do here probably with very deep-seated and fundamental characteristics of the psycho-physical organism, on which are based the instincts of workmanship, imitation and rivalry.

Féré (2) has made an interesting investigation which throws light on the influence of suggestion on work. He found, for example, that the work with the ergograph is decreased when the subject is blindfolded, and even when the room is darkened, the light having a stimulating effect upon the worker. Again, if the subject while experimenting looks at another person who makes the same finger movement without lifting a weight, the amount of work done is increased, the second person acting as a sort of pace-maker for the subject. It is even sufficient if the subject for a time before beginning the work watches the movements of another, although if the subject watches another for too long a period before the experiment the amount of work done is decreased. The effect of such suggestive influence is stronger if the subject is in a condition of fatigue than when he is fresh. In over-fatigue, when the nervous system is in a condition of "irritable weakness" so-called, such suggestive influences have great effect upon the work. Féré compares the fatigued man with the hysteric, both showing increased sensibility and suggestibility.

Meumann (9), in experiments in the People's schools, corroborated the results of Triplett and Féré in a striking manner. Seven pupils of the age of 13 or 14 were tested repeatedly with the dynamometer and ergograph. In case of the test of the pupils separately, with no one else in the room, the amount of work was always less than when others were present. If the experiments were made in the presence of the teacher alone, the pupils did not do as much work as when they were all together without the teacher. On another day the pupils came to the test at 4 o'clock in the afternoon after the school work. It would be supposed, if we may trust the experiments made by Kemsies and others, that at this time of the day there would be a considerable decrease in the amount of work that could be done; but Meumann tried the experiment of suggestion by say-

ing to them that youth of their years ought not to be affected by a little school work, a view which they eagerly approved. As a result of the experiment, it appeared that while the two weakest of the seven pupils showed a considerably less ability to work than on occasion of an earlier morning experiment, and two others of rather slight muscular strength did not do quite as much work as before, the other boys showed quite different results, and did more work than at the earlier test. As a general result Meumann concludes that with every change in the external situation, in the co-workers present, in the suggestion given by the experimenter, the amount of work is altered in a typical manner, and these changes appear in the same way in the case of children of different ages.

From this it appears, as Mayer points out, that pupils in a class are in a sort of mental *rapport*; they hear, see, and know continually what the others are doing, and thus real class work is not a mere case of individuals working together and their performance the summation of the work of many individuals; but there is a sort of class spirit, so that in the full sense of the word one can speak of a group performance which may be compared with an individual performance. The pupils are members of a community of workers. The individual working by himself is a different person.

A noteworthy result of these investigations is the apparent immunity of children to distraction from ordinary causes. Schmidt found that the outside disturbances,—the noise from the street, from adjoining rooms, and the like, had little effect upon them. It was only interruptions that distracted their attention, such as conversation with others, that affected the quality of their work. It appeared even that a home task completed without disturbance might be poorer than the corresponding class work, and that a home task when the pupil was disturbed might be better than the class work. And from Mayer's study it appeared that the tendency to distraction is diminished rather than increased by class work.

Meumann in tests of the memory of pupils alone and when working together found similar results. Disconnected words of two syllables were used which were written down, pronounced once to the pupils, and then written down immediately by them from memory. Two groups of words,—one, substantives of concrete perceptive content familiar to all the pupils; the other, abstract nouns such as mankind, order, organ, culture, and the like were used. As a rule the class teachers pronounced the words, giving first three words, then four words, then five, then six, then seven. As soon as the series was ended the time was noted in which the quickest pupils finished the task. After the experiment was completed, Meumann took

certain individual children of the class for a repetition of the experiment alone and gave them new words similar to those used in the class. It would naturally be supposed that the children working in the class-room with all the inevitable noises and disturbances would not remember as well as when tested alone. The result of Meumann's investigation, however, was surprsing. While in case of children 13 and 14 years of age there was no essential difference in memory for the individual and the common test, the difference was remarkably large in case of the younger children, especially in case of those 8 and 9 years of age. On an average of all the tests Meumann found that when three words were given the children remembered them correctly. With 5 words 4.9 were remembered correctly. In case of 7 words 4.6. On the other hand, with the individual test, on an average all remembered 3 correctly; in case of 5 only 3.4 were remembered; in case of 7 only 3.2 of the words. Thus on an average with the individual test the children remembered considerably less than in the class. The results were so constant that not a child was found who remembered more in the individual test than in the class test. From this Meumann concludes that the great number of disturbing influences to which children are inevitably exposed in the class-room,—the noise of writing, whispering, walking about, the occasional words of the teacher, the sight of the movements of the pupils, and the like, which one would naturally suppose would make the results inferior, have no special influence.

Meumann asked a number of the pupils in case of the individual tests whether they would prefer to take such exercises in the class or alone, whether they were disturbed by the noise of the other pupils. To his surprise 80% of the pupils gave the decided answer that they would prefer to do the work in the class. Some 15% gave no definite answer. The others, an extremely small minority, replied that they were disturbed in the class-room; and in most cases these were sensitive, nervous or weak children, although among them were some individuals of decided talent.

Meumann cites similar instances when external disturbances do not affect one, for example, in psychophysic experiments the striking of one or several metronomes in the case of most persons has no effect upon their work. Frequently we do better work when surrounded by noises in some such way; and experiments, as well as the experience of daily life, show that the total absence of noise frequently relaxes our energy for work. Meumann gives the case of his own experience in studying on Sunday in the totally empty university building at Leipzig, where there was a deathly stillness. At first he began to work with the expectation of doing a specially large amount,

but regularly found that this absolute stillness made him sleepy, and had a stupifying effect which decreased the amount of work done. Most external disturbances are not real disturbances of the progress of mental work. They are rather stimuli for increasing the energy of concentration. On the other hand, a decrease of the mental work is brought about only when the attention is turned from the work in hand and busies itself with these stimuli. Again we have a remarkable ability of adapting ourselves to distracting stimuli, and thus of gradually overcoming the strongest disturbances. Meumann found one subject who even under the strong influence of an electric current could observe just as well as before. With children this seems to be perhaps even more true than with adults. Apparently we need not worry overmuch about noise and other ordinary disturbances, but should aim to keep them from the habit of dawdling in study, distraction of attention, and confusion of association.

Again, as Meumann points out, a fundamental law of the will is involved in any activity of this kind. The better results of class work are probably largely due to the greater effort of the will (the *Antrieb* as Kraepelin calls it) put forth by the individual pupils, while in case of work at home or individual work there is likely to be less stimulus of this kind.

It is significant that when the pupils in the class were instructed to work very rapidly, *Recht rasch*, the results were less uniform, and in general not as good as when working under normal conditions. On the other hand, from Mayer's study it appears that when pupils working at home were urged by their parents to work rapidly the result was likely to be advantageous. In the former case there was already, by the presence of the class and the conditions of the work, sufficient stimulus to the will; the added stimulus of the exhortation to work very rapidly defeated its own end by over-stimulation. Whereas in case of the latter, the pupil lacking adequate stimulus to effort, the exhortation to hasten proved beneficial. The bad effects of overstimulation of the will is illustrated also in many of Dr. Triplett's subjects and has often been shown by experiments in the laboratory.

As Meumann points out, the general result of investigation is against home work; but there are some noteworthy exceptions. School work or the work of pupils in a group is on an average in all years of the People's school superior both in quantity and quality to home work and to work in solitude; but the general exceptions can be formulated as follows: home work is the more valuable the more the child's work takes on the character of an individual performance requiring the stamp of personality, and the more the higher mental faculties,—im-

agination, judgment, etc., are required; and the school work, on the other hand, is the more valuable the more the work bears the character of a mechanical, memoriter performance, and the less it demands the stamp of personality. Hence home work is specially valuable in the writing of compositions in the mother tongue, and perhaps in work in geometrical problems, and original drawings and modelings; on the other hand, the ordinary school practice of giving material to be learned by heart and written arithmetic for home tasks is contradicted. Such work is apt to result in untrustworthy and inaccurate memorizing which is injurious. The value of home work, according to Meumann's observations of the notebooks of the pupils, increases with the age, and not until the last two school years of the eight-year course attains a value which would make home work appear as an essential complement of the school work.

Actual practice as regards home study in this country and in Europe varies greatly. In 25 European cities Buchneder (1) found all degrees of home work from total freedom to an astounding amount. But home tasks were given in all these cities except Zürich.

In Zürich a school regulation forbids the giving of home tasks in the elementary schools, and recommends reducing the home tasks to a minimum in the higher grades. The regulation in respect to home tasks in the secondary schools reads as follows: "The home work must be thoroughly prepared for by the instruction. The repeated copying of the same task as a mere means of punishment is inappropriate. From the forenoon to the afternoon of the same day no tasks may be given. For Sundays and holidays, as well as the vacations, no more tasks are to be given than from one day to another. Where several teachers give instruction in the same class, there should be an understanding in regard to the number and extent, and a proper division, of the home tasks."(1)

The Prussian Hesse regulations for the higher schools are: for pupils 10-11 years old, 1 hour or 1½ hours; for those 12 to 13, 2 hours; for those 14 to 15, 2½ hours; for those 16 to 18, 3½ hours for daily tasks, with Sunday free. (7)

In Wurttemberg the statute of March 19, 1896, in regard to home tasks is as follows:

"1. The house-tasks, including the memoriter material, should be not more than 1 hour for pupils of the 1st to the 3d classes on full school days, and not more than 1½ hours on days when there is no school in the afternoon. 2. For pupils of the 4th class not more than 1½ hours, or two hours when there is no school. 3. For the other classes, in accordance with the programme of 1891, the time allotted for home tasks

should be limited on full days to 1½ hours to 2 hours, on afternoons when there is no school to 2⅔ to 3 hours." (4)

The regulations for the higher schools in Elsass-Lothringen may be taken perhaps as typical of the German states (12). They prescribe the following maximal norms:

For the pupils of	
Vorschule,	from 6 to 9 years, 30-40 minutes.
Sexta und Quinta,	from 9 to 11 years, 1 hour.
Quarta und Untertertia,	from 11 to 13 years, 2 hours.
Obertertia und Untersekunda,	from 13 to 15 years, 2½ hours.
Obersekunda, Unter-u. Oberprima,	from 15 to 18 years, 3 hours.

The official norms for home work vary, however, in different States. In Prussia for the instruction and home work together in the higher grades 8 hours is the maximum. In Hesse the home work for the middle classes is limited to 2½ hours, for the upper classes to 3. Wüerttemberg considers the matter of afternoon instruction,—2½ to 3 hours of home work is prescribed for the free days, and 1½ to 2 hours for the days with afternoon instruction.

As a matter of fact, according to Dr. Jäger, occasion is frequently given for working more than this amount; but even regularly this amounts to a daily task of never less than 8 but for the most part 9 to 10 hours of mental work. This, he thinks, a conservative estimate for the 15-year-old boy. In criticism of this he argues that the normal day's work for the brain worker should never be more than the hours for one who does physical work, and when we consider that the pupils are in the period of growth and development this demand of 8 to 10 hours daily work indicates over-pressure and seriously threatens the health of the growing youth. Still further danger lies in the fact that the larger part of the work must be done in a sitting posture and in closed rooms. Still further, one cannot stop mental work at once as one does physical work, and the strain, the worry, and the repetition of associations, continue after the time of the actual tasks even into sleep, and the brain of the children—even of the most thick-skinned—is apt to be kept in a state of continued tension and excitement.

Dr. Jäger further points out that it is not those lacking in talent, not the lazy, the indifferent, and not the rogue, who are most seriously affected, but the most talented and the conscientious and ambitious pupils, who desire to fulfill all the demands of the school and who are ashamed to avail themselves of forbidden helps with which the other pupils know how to protect themselves. These are the ones who suffer most and are soonest injured.

In 1898–99 the Prussian Kultus-minister made an inquiry in regard to the home work of the pupils in the higher schools of

Berlin and the Province of Brandenburg (7). The basis of their results were the daily records and the reports of the pupils themselves. Out of 91 institutions 57 reported that the prescribed limit of time for home study was not surpassed; in case of the others, this occurred only in individual cases in *Tertia*; in *Untersekunda*, in 14 cases out of 88; in *Obersekunda*, in 6 out of 57; in *Prima*, in 21 out of 102. An older investigation made by Alexi found the actual amount of time spent in home work by the students of the Berlin *Gymnasien* to be in *Sexta* 10 hours; in *Quinta* 11; in *Quarta* 14½; in *Tertia* 18-22 hours; in *Secunda* 33 hours; and in *Prima* over 33 hours per week. This, too, without reckoning the hours in which the teachers gave the pupils extra assistance, which amounted to considerable in the lower and middle classes. These long days were not confined to the boys. Daiber reported diligent pupils in the upper classes of the girls' schools who worked 10 or 12 hours daily. In his famous address at the opening of the Berlin School Conference the German Emperor declared that when he was a student in the *Gymnasium* at Cassel, the pupils were obliged to report to the Director each morning the number of hours spent in preparing the task for the day. From thoroughly honest reports it appeared that the students in *Prima* spent from 5½ to 7 hours in home study.

Kemsies (6) has made a very careful study of the home work of his own pupils in an *Oberrealschule* in Berlin. The average amount of home work per pupil per day was 1 hour and 7 minutes, the average for Mondays, Tuesdays and Thursdays being somewhat more than this, the amount for the other three days amounting to less than an hour. Quite a different picture appears from the study of the work of individual pupils. Here enormous contrasts appear; one pupil, for example, reports for one day only 16 minutes, another, 1 hour and 52 minutes.

In this country we have no definite statistics in regard to the amount of home work done by pupils. Perhaps in most schools home tasks are allotted; but the amount of time actually spent by the pupils varies greatly from perhaps an average of 33 minutes in the grammar grades, as found by Mr. Lyford in a Worcester school, to 1 to 3 hours found probably often in high schools (5 and 16); and the individual differences are enormous, some pupils working not at all while others spend many hours in home study.

It should be noted that in this country a large part of the older pupils, especially the boys, do work outside the school. While we have little statistical data in regard to this, studies by Scudder and others indicate that the percentage of boys who have such work is large. Mr. Johnson (5), in his Study of the Habits of Work of High School Pupils in seven cities in

Indiana, found that of 600 pupils 512 had some employment other than school work; the boys delivering papers, working in stores, etc., the girls employed in household duties, etc. The seniors he found devoting more than two hours a day to employment other than school work.

Miss Trumbull (21), a teacher in the English High School in Worcester, found among 380 boys 172 who were thus employed, that is, a total of 45.26%. Of these 29 were only occasional workers, but the average time of work for the remaining 143 was 15 hours and 31 minutes per week for each pupil. The minimum time of employment was 20 minutes, and the maximum 48 hours per week.

Among the varied employments of these boys were the following: "work on farm, care of horses, driving team (grocery, laundry, etc.), baggage transfer, jobbing, choring, tending boiler, care of private grounds, janitor, work in markets and stores, in shops, factories and printing offices, running elevators, bill-posting, doing errands, delivery with automobile, work in laboratory assisting a teacher, employment in offices (doctor's, insurance, etc.), agent, reporter, extra work in a newspaper office (one pupil being thus employed from 6 p. m. to 1 a. m.), draughting, work in library, in the post office, ushering at theatre, and lastly, lighting lamps, delivering papers and peddling milk."[1]

In individual cases the work of these pupils was obviously a serious interference with their school work and decidedly injurious. Miss Trumbull gives the following illustrations: "No. 48 on list delivers papers from 5 to 7.30 A. M.; No. 127 does the same from 4 to 6 A. M.; No. 142 has a milk route of four hours before 8.30 A. M.; No. 148 has a paper route from 3.30 to 7 A. M.; No. 151 works four evenings a week from 7 to 12; and No. 102 works from 6 P. M. to 1 A. M. daily.

"I once rebuked a junior boy," she writes, "for being abstracted and absent-minded in his fourth-hour recitation. . . . . and he blazed out a remark . . . . the content of which was that he guessed if I got up at half-past two, and peddled papers till six, I would be stupid, too, when eleven o'clock came.

" . . . . But the worst display of temper I ever encountered on this subject was from a first year boy, whose work was absolutely worthless. He was rebuked in class for his poor work and inattention, when he returned this appalling answer that he rose at midnight and peddled milk till just time to get his breakfast and come to school, and if he could sleep in the afternoon he was going to, whether he knew anything about algebra

[1] p. 56.

or not. I had nothing to say. I should have felt that way myself."[1]

Educators seem to be pretty well agreed that the reason for home tasks is to give opportunity for self-activity and for memory drill in what has already been studied; and there is also a consensus that all tasks allotted for home work should be anticipated in the school.

The main point of the instructions in the Prussian decree of 1884 is that absolutely nothing should be given for home work which has not thoroughly been prepared for in school. The law is explicit almost to prolixity upon this point. "It is recognized," says the decree, "as an undoubted need in the process of instruction that, for example, in the linguistic instruction the mastery of the forms and of the vocabulary in learning a foreign language should be accomplished essentially in the hours of instruction, and the home work should be devoted merely to completing the accurate learning, and that a definite introduction should be given to the preparation for the reading in the foreign tongue where it first occurs; that the home tasks in the written translation into a foreign tongue should be thoroughly prepared for in oral exercises in reading; likewise, in the field of mathematics it is demanded that the tasks allotted for home work should be thoroughly prepared for by the hours of instruction and in no way should they go beyond the ability of the pupils thus developed. And in general it is to be demanded that the home work of the pupils should in no case be employed as a substitute for that which the hours of instruction can usually furnish, but as a continuation and supplement of the hours of instruction."

Schmidt found suggestions of individual differences in children in regard to home work, and further investigation he thinks might show that perhaps there are two types—some who naturally do their best work in the school, others who do their best at home—typical school workers, and typical home workers. Perhaps the number of home workers increases with the age of the pupils. Mr. Johnson enquired in regard to the high school pupils' preference for working at school or at home. Two-thirds of the pupils preferred to study at home rather than at school, and yet all the pupils came "from schools in which the discipline is excellent and all the school arrangements such as to make study at school pleasant and effective." Also the preference was decidedly in favor of studying alone rather than with others; 272 preferred to study alone, 59 with others. The proportion of those preferring to study alone increases with but one exception throughout the years of the

[1] pp. 57-58.

course, only 5 out of 53 seniors preferring to study in company with others, and nearly all who preferred to study at home preferred also to study alone; while about half of those who preferred to study at school preferred also to study with others.

The trend of opinion now is rather strongly against the giving of home tasks. The opinion of hygienists is that it leads to over-pressure, at least in many individual cases. The opinion of many school men also is that it leads to deception and slovenly work, and that only a minimum amount is necessary. Schanze's resolution at the Nuremberg Congress (13) expresses this view perhaps none too strongly. "The house-tasks, with the exception of those which relate to instruction in foreign languages, are to be looked upon from the point of view of instruction as unnecessary; from the educational point of view they do more harm than good. Their abolition, therefore, should be striven for." On the other hand, Schmidt's study, in which he carefully considers all the facts involved, corroborates the verdict of experience that often such home study is of great pedagogical value.

In the case of the poor, where home conditions make hygienic study impossible, or where so much work must be done by the pupils that there is no time for study, the allotment of home tasks should be altogether condemned. In case of the well-to-do, where the parents wish to share in the education of their children and where outside tasks like instruction in music, domestic duties, or the like, may be quite as important as the school work, the allotment of home tasks is likewise undesirable. The safe rule would seem to be that no home work should be prescribed; but where this seems desirable, suggestion for spontaneous work on the part of the pupil may well be given.

Conclusion.

From the results of experiment and from observation, the following inferences seem to be justified:

1. In many individual cases there is clearly danger to health from home work, but under favorable conditions home study is of great pedagogical value.
2. The general rule from the point of view of hygiene is that wherever possible home tasks should be limited to spontaneous work suggested by the teacher.
3. The special evils likely to be connected with home study are the tendency to deception, slovenly work, the formation of habits of carelessness, dawdling, error, and confusion.
4. There is a consensus both of educators and hygienists that whatever home tasks are allotted should be carefully pre-

pared for in the school. German experience has so fully established this point that it is incorporated in the Prussian law.

5. Home study can more advantageously be given in drill in language forms already learned, especially in the foreign languages, and in the writing of essays in the mother tongue and other original work. Home work in arithmetic and the like is of doubtful value, and often injurious to health.

There is evidence from experiment that the quality of home work in the grammar grades is usually inferior to that of school work. Experiment also indicates that some kinds of work are done better in the class, some are done better when pupils work alone in the home. The more the work requires the exercise of individual talent, the better can it be done alone; the more it is mechanical and does not demand original thinking, the more likely is it to be done better in the class.

6. Ordinary interruptions by parents and others, noise in the street and the like do not seem to be serious distractions to most pupils; but the quality of their work is more seriously affected by psychic distractions.

7. It is probable that there are great individual differences in ability to work in home surroundings. Perhaps, as Schmidt suggests, there are two distinct classes,—typical home workers and typical school workers.

8. In order to give home tasks safely and judicially, intimate knowledge of the pupils and their home surroundings is essential; and for studying these facts at first hand a method like that of Dr. Schmidt, for those who have time for it, seems to be specially commendable. It is valuable because it is a means of coming to close quarters with the facts.

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LITERATURE.

Autobiography of Andrew Dickson White. With Portraits. The Century Co., New York, 1905. Vol. I, pp. 601; Vol. II, pp. 606.

We have here volumes of unusual interest. After describing his boyhood, the second part is devoted to his political life, the third to his professorship, the fourth, his presidency of Cornell, the fifth, his diplomatic service including his duties at the Hague, the sixth, sundry journeys and experiences, the seventh, miscellaneous relations, the eighth, religious development. There are several chapters under each of these headings, and of themselves they recall the wide range of experiences included in these volumes. Save in the last part, on religious life, there is very little of the introspection or confessional that is such a marked trait in the Autobiography of Herbert Spencer. The political experience of the author in this country which was confined almost entirely to his own State is, of course, of far less interest or significance than that in the Autobiography of Senator Hoar. President White has certainly been a rolling stone, but he has contradicted the adage, for he has gathered here a wealth of not merely reminiscence, but experience that will make his book of permanent value in the culture history of this country. Perhaps many readers will deem certain of the numerous anecdotes and reminiscences slightly trivial or perhaps indicative of a somewhat Boswellian attitude toward the great men he has met.

President White evidently took himself very seriously from the start to the extent of keeping diaries, which are sometimes copious. Perhaps there are places in these volumes where we could wish that what appears to be the diary form had been reconstructed or even condensed. Again, the book is one of extraordinary candor. The author states very frankly his own views upon many delicate and controverted points. His outspokenness concerning the Czar, Emperor William, and other living and lately dead men with whom he has come in contact, are, to say the least, surprising. While we are personally grateful and acquiesce in his judgments in nearly all these matters we can but wonder whether personal courtesy or diplomatic usage should not cause the publication of some of these opinions to be deferred a decade or more.

President White was doubtless better equipped for the important and manifold functions he has performed in this country than any one else of his generation. His historical knowledge was that of the professor. His interests centered in modern rather than ancient problems, so that no historian could have brought all there was in him to bear so well upon the practical questions of legislation and diplomacy. President White had the inestimable advantage over nearly all our continental diplomats of knowing his French and German and thus giving his office the dignity it should have. On the whole this is the record of a life of which every American should be proud. Few others are so typically American in their power of adjustment to the varied problems and conditions with success. He has rendered very great service to this country educationally, diplomatically, morally and personally. His views on nearly every topic, save perhaps religion, will commend themselves to the best sentiments of this country. His per-

sonal acquaintance in Europe is perhaps wider than that of any other American has ever been. The author, however, has not displayed in his life the first-class qualities of a great leader. The excellent things he has done have been always the natural next steps that would have been done any way sooner or later. His temper nowhere shows that of a great hero, nor has he the mettle to stand forth to meet a storm of public disapproval alone for a cause he could live and die for. His is not the mind of a great originator. He knows too much from books, travel, and personal acquaintance to believe in his own power to create great reforms. His character was not formed in an environment of storm and stress, and his constitution was too tender and his nurture too favored by fortune to bring him into the closest relation to what Goethe calls the great moral powers. Yet even this is almost painful to say of a man who perhaps better than any other in his generation represents the American ideal of the gentleman and the scholar.

Child Music. A study of tunes made up by quite young children, with very striking examples and illustrative remarks, concluding with elaborate pieces founded entirely upon young children's tunes, by WILLIAM PLATT. Simpkin, Marshall & Co., London. pp. 37.

The author is a poet, musician, and is perhaps better known as an author of novels. His own children, reared in a musical atmosphere, in their dreamy moods crooned melodic snatches which were utterances of sheer emotion. The drawings of children are very whimsical oddities. His sayings come rather nearer expressing his true self, but the true evolution of the child's soul from within is found in song. When twenty-eight months old, the author's boy sang a very simple phrase to the words, "I saw the pussy in granny's window." At three a longer tune was unconsciously invented to the words, several times repeated, "Oh, the sun is on the bath and the birdies are building nests in the trees." Various others express a dreamy kind of wandering, more or less accented notes. The second boy, at seventeen months, uttered a distinctly musical call, imitated a trumpet and showed a distinct sense for key, with leanings toward plagal cadences. The second child is quite as musical as the first, but less prone to dreamy soliloquies. Some of these songs show tonality; others are in very marked cantabile style. Occasionally the words are gibberish. The real minor is rare. The spontaneous music of these children was easily more in tune than music that they had learned. The author believes that canon, instead of being a late refinement of musical art, is one of its earliest developments, and is led to this view by observations on his own children. By rolling sheets of paper like trumpets the children would improvise in unison, the elder leading and the other following so promptly and truly that it was difficult to tell which was the leader. So when the father invented tunes, the children followed with startling ease, as though all three were inventing the same thing at once. If the scale is not natural it is certainly imbibed very early, although when very young children are set to learn even simple little melodies, they lose tune at once. The author's view is that by centuries of culture and experience we have discovered a scale in harmony with natural law which is quickly assimilated. In the history of the race, the plagal cadence is earlier, and children redevelop it for themselves; but in the history of concerted music, canon is an early feature, and this children rediscover. The tunes of the more resolute younger boy more often ended on the key-note. Finally the author has taken these simple tunelets, intact and exactly as they were invented, as themes for rather elaborate compositions of his own, often adding, however, new verses, but adhering

closely to the thematic material of the children. One child persistently avoided strong accents.

The Place of Industry in Elementary Education, by KATHERINE E. DOPP. Third edition. Univ. Press, Chicago, 1905. pp. 270.

The author first reviews the significance of the industrial epochs—hunting, fishing, pastoral, agricultural, metals, travel, trade, transportation, the city, state, the feudal system, the handicraft and the factory. The next chapter is on the origin of attitudes that underlie industry; the fourth on practical applications in infancy and childhood.

A History of Science, by HENRY SMITH WILLIAMS. Harper & Bros., New York, 1904. In 5 volumes.

This is the most comprehensive and ambitious attempt to outline the history of science since Whewell. The first volume is devoted to science in antiquity; the second begins with the dark ages and ends with Linnæus; the third takes us to Helmholtz, Tait and Kelvin; the fourth goes back to phlogiston and traces the history of chemistry, anatomy, physiology, experimental psychology, oriental archæology, etc.; and the last volume is devoted to the British Museum, Royal Society, some physical laboratories, marine biology, medical laboratories, unsolved problems, etc.

Nature Study Lessons for Primary Grades, by MRS. L. B. MCMURRY. The Macmillan Co., 1905. pp. 191.

This volume is divided into two parts, the first treating animal life, with nineteen types—the shepherd dog, cat, horse, cow, sheep, fox and gray squirrel, mouse, rabbit, chick, robin, crow, owl, sparrow, caterpillar, cabbage butterfly, milkweed caterpillar. The second part treats ten plants—the nasturtium, morning glory, wild rose, blue violet, apple, etc. This book is of the chatter variety. "How many of you have seen a dog drive sheep? How did it drive them? Does a shepherd dog know much? How do you know? My father owned a dog named Prince. How could he tell which cattle were not our own? What color are dogs' eyes? Are they larger or smaller than yours; in the same part of the face or not; of the same shape? Do they hear well? Can you prick up your ears? How does he keep off the rain? How many ears has he? Why? Does he make a noise in running? Bring in a dog and point out his toe. How does he talk, etc.?" Should these not be called language lessons?

The Student's American History, by D. H. MONTGOMERY. Revised edition. Ginn & Co., Boston, 1905. pp. 612+lvii.

This follows the lines of the author's "Leading Facts in American History," but is fuller. It has many illustrations, maps, fac similes of handwriting, etc.

Die moderne Frauenbewegung, von KAETHE SCHIRMACHER. B. G. Teubner, Leipzig, 1905. pp. 130.

This little book traces the history of woman's emancipation in each Germanic, Romanic, Slavic and oriental land, beginning with thirty pages in the United States.

The Trend in Higher Education, by WILLIAM R. HARPER. University of Chicago Press, Chicago, 1905. pp. 390.

This book is made up of twenty-three papers, mostly addresses, some of which have been notable, such as The University and Democracy, Religious Education, Waste in Higher Education, Dependence of the West upon the East, The Contributions of Johns Hopkins, The

Urban University, The Business Side of the University, Theological Seminaries, Co-education, Alleged Luxury, Length of the College Course, etc.

The Classics and Modern Training, by SIDNEY G. ASHMORE. G. P. Putnam's Sons, New York, 1905. pp. 159.

These addresses are published in order to call attention to the value of the ancient languages and literatures to education. The author thinks that in these days the popular interest in antiquity is becoming more therapeutic than real. The addresses do not attempt to deal with details of technical scholarship, but are excellent works of what may be called appreciation. The author pleads for classics in our schools, particularly Latin, and then discusses, in the four chapters that follow, our classical inheritance, the tragedy and comedy of the Greeks, classical archæology, the Olympic games at Athens in 1896.

Citizenship and the Duties of a Citizen, by WALTER L. SHELDON. (Ethics for the Young, 4th series.) W. M. Welch Co., Chicago, 1904. pp. 466.

This is a treatise not on civil government, but on ethics, intended as lessons and not for continuous reading. Each chapter might be evolved into a dialogue. The writer seeks to link the idea of duty with that of citizenship, and throughout seeks to suggest what we ought or ought not to do as citizens. This the author would have us regard as a separate department. He avoids disputed questions, party, and doctrinal issues, adopts the conversational rather than the literary method, appends classical selections and memory gems, etc. On the whole the work suggests the French texts of citizenship. The topics involved are relations to home, family, city, money, the ballot, taxes, office holding, the flag, crime, disputes, etc.

Duties in the Home and the Family, by WALTER L. SHELDON. (Ethics for the Young, 3rd series.) W. M. Welch Co., Chicago, 1904. pp. 411.

This work is devoted to the home and the family. It treats of the relation of each member to the other, obedience, the table, sorrow, family, pride and honor, hospitality, festivals, eye service, quarrels, respect for parents, sickness, private room, and so on.

The New Knowledge. A popular account of the new physics and the new chemistry in their relation to the new theory of matter. By ROBERT KENNEDY DUNCAN. A. S. Barnes & Co., 1905. pp. 263.

This book we believe meets a real need in telling the latest things in physics and chemistry that intelligent people want to know. The author explains the periodic law, gaseous ions, radio-activity, resolution of the atom, inorganic evolution, new knowledge and old problems, all in an interesting and lucid way which shows a good command of the subject and excellent powers of exposition.

The White Peril of the Far East. An Interpretation of the Significance of the Russo-Japanese War. By SIDNEY L. GULICK. Fleming H. Revell Co., New York, 1905. pp. 191.

This is a striking and earnest book. The author is a staunch friend of Japan, a great believer in her power to maintain a prolonged war. He is trained by long residence in the East and his book is certainly one of the most timely and opportune. Those who have read his earlier works on the "Evolution of Japan" and the "Growth of the Kingdom of God," will appreciate this new interpretation of the significance of the present war in the East.

Economy in Education. A practical discussion of the present-day problems of educational administration. By RURIC N. ROARK. American Book Co., New York, 1905. pp. 252.

This work treats in convenient compass, attractive form, and with comprehensiveness, the rural, the city school, the college, the training school; and then, passing from individual schools to educational systems, treats of the organization and inter-relation of school units in the state and city, and the curriculum; then passes to the correlation of the school with the community, home, library, museum, art galleries, press, pulpit; and finally the projection of the school into the community, of playgrounds and vacation schools, extension, and so on.

Ready Money, by GEORGE H. KNOX. (Personal Help Library.) Personal Help Publishing Co., Des Moines, Iowa, 1905. pp. 317.

This author has a clear, concise style of putting things, but his book is somewhat nondescript. In the first part he treats of such themes as getting started, courage, books, business ways, why men fail, nerve, results, self-mastery, emergencies, initiative, brain, muscle, trifles, and so on; and the second part contains bits of eloquence that have pleased the writer from Demosthenes down to Henry W. Grady.

Trusts, Pools and Corporations. Edited with an introduction by William Z. Ripley. Ginn & Co., Boston, 1905. pp. 477.

This is a volume of special studies by different authors, treating respectively the Michigan Salt Association, the Whiskey Trust, the Adyston Pipe Company, the promotor's liability for unrevealed profits, the Asphalt Company, the Massachusetts Corporation Law, tin plate, the Sherman Anti-Trust Act, trade combinations at common law, the Steel Corporation, Mercantile Marine Company, etc.

The Right Life and How to Live It, by HENRY A. STIMSON. A. S. Barnes & Co., New York, 1905. pp. 256.

This work is dedicated "To the dear children in my own home," and has a brief, rather pragmatic introduction by Superintendent Maxwell, of New York. The topics discussed are self, the universe, nation, family, God, cause, progress, habit, character, duty, intellect, choice, feeling, obligation, the sin of suicide, the body, sex, the true self, work, the citizen, business, home, sport, animals, mediocrity. It is a good, fatherly book.

Professional Education in the United States. Teaching. By HENRY L. TAYLOR. Higher Education Bulletin 24. New York State Education Department, January, 1905, pp. 393.

This is a convenient kind of index of professional training in the United States. It gives a few lines each to the colleges, is fuller on the normal schools, and has an interesting chart illustrating the American system of education as exemplified in New York.

Paris and the Social Revolution, by ALVAN FRANCIS SANBORN, with drawings by Vaughn Trowbridge. Small, Maynard & Co., Boston, 1905. pp. 404.

This is a very careful study of the anarchists in Paris, what they want, their mode of propaganda, the revolutionary traditions of the Latin Quarter, the Socialists, Bohemians, those who starve, commit suicide, freaks, the revolutionary spirit in poetry, music, art, literature. There are many wood cuts, some of them full page.

Der Schuss von der Kanzel, von CONRAD FERDINAND MEYER. Edited by Martin H. Haertel. Ginn & Co., Boston, 1905. pp. 141.

The Story of Columbus and Magellan, by THOMAS BONAVENTURE LAWLER. Ginn & Co., Boston, 1905. pp. 151.

Autobiographical Sketches and Personal Recollections, by GEO. T. ANGELL. Published by "The American Humane Education Society," Boston. pp. 114+37+28.

Short Stories from American History, by ALBERT F. BLAISDELL and FRANCIS K. BALL. Ginn & Co., Boston, 1905. pp. 146.

A Practical Commercial Speller, by ELIZABETH F. ATWOOD. Ginn & Co., Boston, 1905. pp. 201.

Journal of Social Science, containing the Proceedings of the American Association. Edited by Frederick S. Root. No. XLII, September, 1904. Boston Book Co. pp. 192.

How the United States Became a Nation, by JOHN FISKE. Ginn & Co., Boston, 1904. pp. 254.

An Inside View of Trusts. Testimony of Members of the Standard Oil Company taken by the Industrial Commission, 1899. Appeal Printing Co., New York. pp. 392.

A Roman History in Latin Extracts. Edited by M. G. Derham. Part I, from the founding of Rome to the Punic Wars (753-264 B. C.), 1905, pp. 122.

BUDAPEST COMMITTEE OF CHILD STUDY.

The plan of the establishment of an Institution of Child Study in Hungary was made in the year 1901, when, upon the proposition of Mr. László Nagy, Director of the Preparatory Training School, a conference was held in Budapest. The institution, however, could only be definitely formed in March, 1903, under the denomination: "Committee of Child Study." The presidents are: Count Sándor Teleki, M. P., Dr. Sándor Náray-Szabó, Ministerial Councilor, and Dr. István Bárczy, Alderman of the Municipal Council of Budapest, acting Vice-President and Director, László Nagy.

The institution is sustained by the public in general and especially by physicians and pedagogues.

It was our Committee which instituted the Public Conferences on Child Study where popular lectures are held on special questions of Child-Psychology, the audience being permitted to ask questions or else to address the meeting. Such lectures were held by Director László Nagy on "The Method and Object of Child Study," Paul Rauschburg, M. D., on "The Determination of the Mental Faculties of Children," Professor Zsigmond Várady, on "The Development of the Speech of Children," Director Mihály Láng on "The Instinctive Handiwork of Children," Professor Antal Streitmann on "The Drawings of Children," Gyula Grosz, M. D., "The Physical Development of Children," Professor Dr. Béla Lázár, on "The Fancy of Children," Károly Décsy, M. D., on "The Effect of Diseases upon the Mental State of Children," etc.

In the year 1904 the Committee organized a Course of Child Study for teachers under the lead of Pául Ranschburg, M. D., an eminent Child Psychologist. The Course consisted of a theoretical part of two months, which was frequented by twelve teachers of Budapest. In this course the students learned all the exact methods of investigations of Child Study. This was followed by a practical course of two weeks during which the students made practical investigations, partly

of healthy and partly of imbecile children, and also assisted in the clinical treatments of Dr. Ranschburg. The cost of the course was partly supported by the Municipality of Budapest. The teachers who attended the courses are at present members of the School Section of the Committee, of which Dr. Ranschburg is the President and Géza Jablonkay the Secretary. The members of this special section make their investigations according to an established plan, while the results of the investigations are reported in common. At present they are occupied with the investigation of the Child's faculty respecting numbers and the Child's stock of notion and words.

Our committee will in the autumn next year arrange an exhibition of Child Art embracing nine groups. The objects of that Exhibition will be partly scientifical, partly pedagogical. It is intended to show the child's soul by means of the collection and exhibition of data concerning the artistic expressive movements, the plays, handiwork, dances and songs of children, consequently the concrete and permanent phenomena of the child's soul, which just for this reason are easily accessible and easily to be studied.

By the exhibition of children's art, attracting therewith the attention of pedagogues, physicians, and of the public in general, to the vital functions of children and by creating an interest for Child Study, we intend rendering a service to the cause of the education of children. In order to make this object of the Exhibition evident and also to secure its effect, we have in view to exhibit the single groups of the science of education and of pedagogy, namely, the groups of drawings, of pictures, of the class-room, of patterns, of playthings, etc.

We intend, by contrasting and comparing with the instinctive emanations of the child's soul, the pedagogical processes and means, to make the mutual relation of these two, namely, their agreement or discrepancy apparent, from which may result very important information for the future. And in taking the children's instinctive as well as conscious drawings and handiwork for an object of the Exhibition, we intend to suggest the great importance of artistic and technical education as the means of forming the apex of our whole system of instruction and education.

Another important idea of the Exhibition consists in our trying to draw on the whole line a parallel between the inner life and the didactics of normal and abnormal children. For this reason we admit to each group the point of view of the natural symptoms and of the means of instruction of abnormal children. By this juxtaposition we intend likewise to open up new paths of Child Study.

It is likewise a very important plan of the exhibition that together with the ontogenetical point of view it is meant to permit illustration also of the phylogenetical points of view. In this way the Exhibition will furnish an illustration both of the emanations of the child's soul and of the naïve drawings, handiwork, songs and playthings of the Hungarian people as also of tribes of a primitive state of culture.

The Committee of Child Study intends to issue towards the end of this year a Periodical of Child Psychology.

Communications to be addressed to Mr. László Nagy, Director and Acting Vice-President of the Committee of Child Study, VIII, 16/b Üllöi-út, Budapest, Hungary.

NOTES.

It was the privilege of the writer, through the courtesy of the school board of a large city, to attend one of its meetings. The board consisted of five members, each receiving a salary of $1,200 and being

elected by the people for a term of four years. Meetings are held weekly and are open to all who desire to attend, although most important questions are settled before in an informal meeting of a committee of the whole. There were in this meeting, I think, some $38,000 appropriated. Although the public could be admitted, no outsider was present save two reporters to whom the salaried clerk gave all the information they desired. The meeting lasted perhaps half an hour. It was a revelation to me. There were no wrangles or disagreements, no talking to the public, but the business principles of an office of a great corporation were observed. Each member has specific duties. When the change was made from an old-fashioned, large, lumbering board, there was immediately a very marked reduction of expenses, great improvement in the personnel of the teachers, better schoolhouses, some of them the best, for the money, I have ever visited, and a new educational spirit pervaded all. I had visited the schools of this city, which expends over half a million dollars a year, receiving twenty-five dollars per regular pupil from the city and an average of from two and a half to three dollars from the state, and there was a very marked improvement in every respect. In fact, the first year of the new regime $81,000 were turned back into the coffers of the state and city. This system secures the services of the best men, and to see how everything was done was a revelation. G. S. H.

An Automatic Kindergarten. The first grade of the Riverside School, Tewksbury, opened last fall with 56 pupils, children of the mill operative class, rather undeveloped, some not speaking English, many barely five years of age, "babies" who fell asleep in their seats. There was one teacher and the school day was five hours long.

A large, well-lighted, well ventilated room, unoccupied, was converted into a play room. Two corners of the room were boarded off for sand piles, a load of sand in each. Between the sand piles was placed a large doll house, now being furnished by the older children of the building with wall paper of original design, rugs, curtains, toy furniture of wood, such as tables, chairs, desks, upholstered couches, easy chairs, piano, book shelves, sofa cushions, pictures, etc.

For toys there were supplied carts, reins, wheelbarrow, shovels, go-cart, doll carriage, dolls, doll hammock, toy tables, stove, kitchen utensils, brooms, tea sets, small chairs, balls, bushels of blocks, picture books, sliced pictures, drum, Hiawatha suit, wigwam, a swing made of a single pole, with cross piece at the bottom, a climbing ladder from which descended a smooth waxed board for a slide, and some other things.

The children are turned into this room in divisions of about fifteen children at a time, both morning and afternoon, without any attendant, returning to their work at the summons of the teacher to give place to the next division. The children play very happily and, strange it may seem to some, without quarreling and without disturbing the other rooms. They apparently are not fatigued by the school day, and have done as much (the teacher, Miss Barnes, affirms twice as much) regular work as previous classes. The children are particularly skillful in manual occupations, the non-English children have gained very noticeably in command of the English language, read ordinarily well, sing particularly well, and the attendance has been better than in previous years.

The town has expended, perhaps $30 on the room, an expenditure which will not need to be incurred again for several years, some toys were donated, and the teachers raised about $15 by a candy sale. The town has practically saved the salary of an assistant teacher for at least a part of the year. G. E. JOHNSON.

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THE HIGH SCHOOL TEACHER FROM THE PUPIL'S POINT OF VIEW.

By WILLIAM F. BOOK, Fellow in Clark University.

I. INTRODUCTION.

The far reaching significance of the years spent in the secondary school has received renewed emphasis from the recent publication of President G. Stanley Hall's new book on adolescence. Speaking of this adolescent stage of life this pre-eminent authority says: "These years are the best decade of life. No age is so responsive to all the best and wisest adult endeavor. In no psychic soil does seed, bad as well as good, strike such deep root, grow so rankly or bear fruit so quickly or so surely as in this."[1] Dr. Burnham speaking of the opportunities of secondary teachers says: "The importance of this whole period from a wider point of view and the interest that centres about it can hardly be exaggerated. . . . Pupils at this period are open to new impressions with almost hypnotic susceptibility. The opportunity for good is only equalled by the possibility of evil."[2] Professor Bell, in a study of "The Teacher's Influence," found that pupils were influenced most for good by their teachers at the high school age, the time of the greatest influence culminating at about fourteen for the girls and fifteen for the boys.[3] Yet, notwithstanding the importance and significance of these years, it is a melancholy fact that here in the United States the teachers who have charge of the instruction of the youth at this most

[1] Psychology of Adolescence, Vol. I, p. xviii.
[2] Suggestions from Psychology of Adolescence. School Review, Vol. V, pp. 458-9.
[3] *Ped. Sem.*, Vol. VII, pp. 493-494.

promising but critical stage of life, the teachers of our colleges and high schools, are not specially trained for their work. "The opinion is still prevalent," to use Dr. Burnham's phrase, "that the elementary teacher needs special training but that the secondary teacher is such by the grace of God and the authority of his Alma Mater."

In 1902 there were in the United States 6,292 Public Secondary Schools containing 550,611 students taught by 11,457 women and 10,958 men.[1] According to Luckey (16) and others who have carefully investigated the subject these teachers have had no special training for their work. What they know about the psychology of development, about childhood and adolesence, whatever professional training they have acquired, they have gained from self-directed study and from their own experience. No special training is required. None is given save that inevitable training, good as far as it goes, which the inexperienced teacher always gets from the pupils themselves.

To be sure much has recently been written by so-called educators telling secondary teachers just what they should be, what they ought to do, just how they should teach each particular branch, and the rest. But in giving this off-hand advice these writers have followed closely the old scholastic traditions, pointing out with great care what subjects should be taught, calculating logically the comparative value of each, and devising methods of instruction whereby the greatest number of the things they prescribed might be learned by the students in the shortest possible time. In a word these educators have almost without exception emphasized the scholastic product, the content of culture to the neglect of the growing youth. However valuable this content of culture may be or however important the methods by which the young are initiated into this vast cultural inheritance, the matter may be viewed from another side. Instead of looking at every educational problem from the point of view of convention and the value of the subjects to be learned or of the best methods of presenting them, the whole matter may be looked at from the standpoint of the youth. This point of view once accepted and immediately all standards of value change. From this natural or psychological point of view we continually ask what is best for the growing boy and girl. The learning of a definite number of things in certain ways, no matter what their value may be, no longer is the important thing; the development of individual character becomes the highest end. To the method of instruction is now added the best method of mental

[1] Rep. of Commissioner Ed., 1902. Vol. I, p. xvii.

work for the child. Studies, programmes, curricula, methods, teachers, all are made subservient to the welfare of this growing youth. What promotes his highest natural development is good, what retards it is bad. His natural healthy development is made the measure of value in every case.

The present study is an attempt to approach one pedagogical problem from this psychological side—to study the teacher from the pupil's point of view. Instead of following the old traditional, conventional way, determining by *a priori* logic what the teacher should be and do, the attempt is made to find out from the students themselves what their favorite teachers are like; what their model teachers' qualifications are, what their most helpful teachers actually do. The question how far the pupils are right in their judgment of what it takes to make a model teacher, and how far wrong, as well as the question of the value, significance, and bearing of what they have said does not concern us here. The primary object is to get their point of view; to get as full and accurate a description of the teachers liked and found helpful as possible; to present the pupils' honest reactions whatever they may be.

Source, Nature, and Value of Material. 1,067 senior high school students (334 m., 733 f.,) were asked by their teacher of English to write a composition on "High School Education," freely discussing some or all of the following ten points: 1. What a high school ought to do for me. 2. In what ways the high school has helped me most. 3. Some sympathetic teachers I have had in the high school or the reverse. 4. Some points in which I have been misunderstood. 5. Why going to high school pays. 6. Why so many boys and girls drop out of the high school. 7. Useless studies in high school courses. The most popular study in our school. Why? 8. My usual "Round" after school. 9. What my parents think about high schools. 10. Some improvements in the high school I would suggest.

These compositions were required as a part of the regular English work, the pupils being asked in each case when the work was assigned to give a true, complete, frank statement of their own personal feelings and experience concerning the various topics they chose to discuss. Each teacher was asked to use such methods and precautions in presenting the work to her class as she thought best to secure a true, complete, and unbiased discussion of the various points. Most of the compositions were not read by any teacher in the school where prepared, the teacher or principal telling the pupils when the themes were assigned and the purpose of the work explained that no teacher in the school would read the papers before they were sent away. Three teachers had the compositions pre-

pared as a regular theme, the directions for the work being given as the ordinary directions for composition work with the precaution, however, that in this case it was a true statement of their own thought and experience that was wanted. In these three schools the teacher read the themes. About two hundred of the compositions were written during one recitation period, the theme paper being passed at the beginning of the period, the directions for the work given without any previous knowledge whatever on the part of the pupils and the finished compositions collected before they left the room. In all cases specific directions were given that the pupils need not sign the papers they wrote; nevertheless, about a third of the papers were signed.

Although the papers were prepared in these various ways no differences could be detected except that those prepared in class discussed fewer of the points, were more poorly organized and did not treat the topics discussed as fully as the rest. Aside from these indications of hurry and lack of time none but individual differences could be detected. Every paper received was unquestionably a true, honest statement of what the pupil actually thought and felt. To read the papers as a whole one cannot help but feel that here is a full, unprejudiced statement of the pupil's own feelings and thought concerning certain things pertaining to the high school.

The discussion of the third point, which only concerns us in this paper, seemed to be especially sympathetic. Not a single paper bore any trace that the writer was prejudiced or had any ill will towards any teacher described. On the other hand there was no noticeable trace of an attempt to flatter any teacher in the school. The genuine feeling of respect and good will that was universally shown, coupled with such a full and frank description of both types of teachers, convinced the writer that the various teachers were described exactly as they appealed to these students. The homeliest expressions were used in describing the qualities admired, the most commonplace virtues received the emphasis, an additional evidence, I believe, of the honesty of the pupils and the genuine value of the returns. What these students have said should, therefore, be taken as a true statement of what they actually think and feel about various individual teachers which have instructed them in the high school.

The compositions were collected from sixteen different high schools in Massachusetts, Rhode Island, New York, Indiana, Illinois, Colorado, Montana and Utah. Of the 1,067 students who wrote compositions 881 (274 b.-607 g.) or 82.5% discussed the third point. 52 of these (26 b. 26 g.) declared that they had never had a thoroughly sympathetic teacher in

the high school or that their teachers had all been about alike. The rest (829) described in detail one or more sympathetic or unsympathetic teachers which they had had in the high school.

II. The Pupils' Favorite or Model Teacher Described.

The Sympathetic Teacher Defined. From the beginning we should clearly understand and keep in mind just what the students meant by a sympathetic teacher and by an unsympathetic one. The sympathetic teacher may be defined in the pupils' own words as "the favorite teacher," "the teacher best liked," "the best teacher I ever had," "the one who understood me best," "the one who helped me most," "the teacher for whom it is a great pleasure to work," "the one whose memory I will always cherish," "the teacher who is respected and loved by all," in a word their favorite teacher who did them most good. The following definitions incidentally given are typical:

"The most sympathetic teacher," writes a girl, "is the good natured, jolly teacher who enters into the fun and talk of the pupils as though she were one of them herself. She is always ready for a good joke but should one be in trouble she is just as ready to help them out. She has the faculty for cheering one up." "My ideal teacher," said another, "is not an automatic or brilliant talker holding herself aloof from us, neither is she a cross taskmaster but one who knows our first names, who knows something about our home lives and helps us in our every day trials and work." That is, these definitions make the sympathetic teacher the cheerful, helpful one. Others say he is the teacher who understands his pupils' character, dispositions and needs. As one girl put it: "The sympathetic teacher is the one whom I think I understand and who I think understands me." Another said: "He is the one who understands his pupils best and who tries to encourage them and help them in every way he can." In some cases the word sympathetic was used synonymously with the more important characteristics of the ideal teacher described. That is the sympathetic teacher was "the kind, patient, just teacher, the teacher most considerate of her pupils' needs," "the cheerful, jolly teacher who was always ready to help," "the teacher who was specially interested in her pupils and in her work, who was not only a teacher but also a friend," and the like. In all the papers save three, which used sympathetic in its cheaper sense to mean compassion or pity instead of real helpfulness, the term always meant the best and most helpful teacher the pupil ever had. The term unsympathetic, of course, was made to mean just the reverse.

What follows, therefore, is the presentation of what these 829 senior students have said about the *best* and the *worst* teachers they have had in the high school. It should be borne in mind that in every case an actual living teacher was described, one actually doing what the pupils find helpful, and not the usual imaginary hypothetical teacher so often talked about in our pedagogical books. A careful examination of what the pupils have said will, therefore, not only enable the

teacher to see himself[1] as his students see him but ought to give us a clearer notion of what the model high school teacher should be. If the pupils are in any sense competent judges of their most helpful teachers and have not forgotten what such teachers were like and did, we may learn much from their descriptions.

For convenience we may group what the pupils have said about their favorite teachers under the following three heads: First, what they said about their character. Second, their qualifications. Third, what they did. These various points, to be sure, were not thus separately discussed, and such a presentation of the facts cannot take the place of reading the descriptions of the teachers as the pupils wrote them. To get the full force of what the pupils said their complete accounts ought to be read. But it is impossible to give more than a very small part of what they wrote, so, as a matter of convenience, the main facts were teased out, as it were, from the original wholes and grouped as indicated above, in the belief that in this way the points which the pupils especially emphasized could best be set forth. A few slight overlappings may occur, but on the whole the facts are sufficiently distinct to be thus grouped.

1. *The Favorite Teacher's Character. Characteristics Admired.* First of all what characteristics does this so-called "sympathetic" teacher possess? As might be expected many different qualities of character were approved and admired and variously emphasized by the pupils who wrote. All mentioned several qualities of character possessed by the teacher especially liked. A few were universally admired and received great emphasis. After 161 papers had been tabulated it seemed best to keep an accurate count of the number who named or emphasized the various qualifications and qualities of character especially admired or disapproved so as to get some idea of their relative importance. This was carefully done for 720 of the papers (161 m., 559 f.). Of these 101 described unsympathetic teachers exclusively; thirty-seven more had never met a truly sympathetic teacher or declared their teachers had all been about equally sympathetic, so that the papers of only 582 students (115 m., 467 f.) were treated in this way.

One hundred and forty-four (144) of these said their favorite teacher was *kind*, *forgiving*, and *generous*, or negatively stated said he was never *rude*, *harsh*, *sarcastic*, nor given to the use of

[1] Throughout this article the masculine pronoun will be used to refer to the teacher in general. In all the quotations from pupils the pronouns denoting the actual sex of the particular teacher described will be employed.

ridicule. No character qualification was so often emphasized as this.

Most pupils simply say on this point that their most helpful teacher was always "kind," that "he was especially considerate with the dull or slow," that "he was not sarcastic," "never spoke harshly in school or in class," "never ridiculed" and the like, giving these as special reasons for liking him. Typical expressions are :

"She spoke kindly to me when my best friend left school;" "By her kind words she has helped me in many a struggle;" "She is very kind and considerate of a girl who has sorrows or death, or who has been out sick for a time;" "If a girl could not get her lessons she would be more kind and considerate with helping her than the majority of teachers were;" "She has never spoken harshly in my presence since I've been in school." "A certain teacher I once had," said a girl, "was very nervous and at times very impatient and cross. I found it the burden of my life to learn anything she tried to teach while in this state of nervousness. But when she was her normal self she was very pleasant and kind and all went well. It only goes to show that a teacher who is kind can obtain better results than a teacher who is given to impatience and crankiness."

One boy said: "If a scholar is weak on any certain point, unlike a broken-hearted child, he does not need sympathy, he needs a little of the electric current which will wake him up and brace him to his work." Three other pupils, two girls and a boy, thought they accomplished more with teachers who forced them to do their work, and who seemed to take little interest in them. All the rest liked the teacher who took a personal interest in them and was kind. These four cases may be taken, I think, as the exception which proves the rule which is, that the teacher who is kind and takes a personal interest in his pupils is the helpful one. "The electric spark which will wake a pupil up and brace him to his work" can, in ninety-nine cases out of a hundred, be generated by a kindly, sympathetic, encouraging attitude and only rarely in some other way. It should be said, however, that by kindness the students did not mean cheap sympathy but rather a matter of disposition, a certain manner of action, or attitude of mind the possession of which, according to the pupils, enables the teacher to be more helpful to boys and girls of this age.

A second group of characteristics, although mentioned by fewer students than the preceding one, received far greater emphasis. 112 students said their most helpful teacher was *pleasant*, *cheerful*, *good-natured*, *happy*, *jolly*, *witty*, *even-tempered*, and *sociable* or, negatively stated, that he was never *cross*, or *unpleasant*, never *scolded*, *criticised harshly* or *continually found fault*.

One favorite teacher was described as jolly, as unlike most others because "she was not afraid to smile or even laugh once in a while."

Another was "so cheerful and had a manner so pleasing that no one thought of his ugliness." Another "was jolly and pleasant after school, talked freely to her pupils and when anything funny came up let them laugh and laughed herself." Another always had a pleasant greeting for her pupils in the morning when they met her in the hall. "She may not say a word," said the writer, "but her expression is sufficient. As I came into the schoolroom every morning she always had a pleasant smile and a cheery word to say to me which stayed with me all day." "The kind of a teacher a girl likes," said a girl of 18, "is one who can see through a joke and who understands a girl's feelings and difficulties." Of another favorite teacher it was said: "She acts more as a friend than a teacher, and if in trouble I could go to her almost as soon as to my mother. She is very jolly, has a keen sense of humor and often enlivens the lesson with amusing stories." "I have now in mind," said another girl, "a teacher, who on entering the recitation room seemed to carry with her a flood of sunshine which filled the room and outshone all the difficulties of the lesson. This particular teacher seemed never to be impatient, being always able to control herself no matter how serious the fault of the pupil. She taught her subject in such a way as to draw perfect attention. Above all she did not endeavor to make us fear her, but was kind, friendly, sympathetic and pleasant, with a smile for all of us whether we were brilliant or dull." "One teacher I had in my high school course," said another, "made a very great impression on me. Whether the lesson came during the early part of the session or later, whether on Monday or Friday, during a well recited lesson or a poorly recited one, she was always the same sweet-tempered, loving and sympathetic teacher. If a girl did not grasp an idea as quickly as she ought, this teacher did not become impatient, but tried every possible means of making the subject clearer to the pupil, and taught us not to consider school a drudge, but to make it a pleasure."

The boys emphasize this quality as strongly as the girls, but there is some reason for believing that they are not affected as much by their likes and dislikes of teachers as the girls. The following quotation from a boy's paper is typical: "Of course, to some, especially girls, likes and dislikes affect their course in school. I know several girls who have dropped certain studies because they disliked the teacher of that branch. But a boy usually don't pay much attention to an instructor. As a rule he does n't go around after school like a girl to talk to them, unless about some lesson, nor does he take her candy and flowers." However, the boys have their likes and dislikes whether they are as strongly influenced by them as the girls or not. The same boy who wrote the above goes on to say: "One teacher in this school has done me a world of good. He makes you feel your own ignorance of a subject, but at the same time does not make you think he knows it all. We like good-natured teachers," he adds, "teachers who are thorough and considerate in their lessons, teachers who will laugh at a joke or give the class one occasionally themselves." The quotation is fairly typical of what the boys say on this point. In their own adjectives it is the *pleasant*, *cheerful*, *good-natured*, *jolly*, *witty* teacher that is admired and the *cross*, *critical*, *cranky*, *pessimistic* teacher that is especially disliked.

Although this matter of a teacher's disposition and philosophy of life is rarely or never considered as a necessary or even important qualification of the high-school teacher, I believe—and the returns certainly bear me out—that no qualification is more important or necessary. Perhaps the greatest

service the high-school teacher can render his pupils is to assist them in the necessary readjustments they are striving to make. Pupils at this stage are extremely sensitive, almost painfully self-conscious, and shaken by all sorts of doubts. Strange new feelings and emotions dominate their lives and impel them to they know not what. According to their own reports, the cheerful, pleasant, optimistic attitude of a teacher can do more to help them than anything else. If their teacher is of a sharp, sarcastic, pessimistic, critical turn of mind, he not only is disliked by every pupil in the school, but does them a positive and incalculable amount of harm instead of helping and inspiring them as he should. If, on the other hand, the teacher is positive rather than negative, optimistic instead of pessimistic, encouraging and helpful instead of critical, pleasant, good-natured and cheerful, instead of "finicky," "cranky," "over-particular" and "cross," he is universally liked by his pupils and does them, in the words of a boy, "a world of good." Truly the helpful teacher for this stage must possess that higher optimism, born of experience, good health, and much thought, which alone will enable him rightly to guide his pupils through this period of readjustment and doubt.

A third group of qualities emphasized is closely associated with the two which precede. 104 of the ideal teachers described were said to be *patient*, *considerate*, *thoughtful of the feelings of their pupils*, *reasonable*, *not cranky*, *over-particular or unreasonably strict*. The following phrases were most often used:

"She did not get out of patience with you because you could not get the idea of a theorem at first sight;" "Her patience seemed never to wear out and she explained difficult points over and over again." "If she ever had any troubles or cares we never knew it for she was the same pleasant person every day." "He never became cross or even quick tempered if a pupil was a little slow to understand." "If a teacher is snappy," said a girl, "or has the despicable habit of not giving you time to think, the subject in which you have that teacher is like torture." Another girl said: "If only the teachers had this virtue (patience) it would go a great way towards dispelling the bitterness which often accompanies recitations. It would make study a pleasure instead of a torture and increase the bond of affection which ought to exist between pupil and teacher." Many in various forms expressed the thought of the boy who said: "If I have a teacher who has no patience with me I become very nervous and do poorly in my work." Others said of an impatient teacher, "He takes away all our hopes and energy by reproaching us until we lose courage entirely and fail." "It is the teacher who is patient when we are really in need of advice and help, that makes our high school life happy and successful, a pleasure instead of a burden and failure."

Fifty-nine pupils especially liked teachers who were *firm*, *decisive*, *business-like* and *strict*. That is, their favorite teacher,

"always meant what he said," "commanded respect," "kept good order." "was strict in his requirements of good work," etc. One boy said:

"Being too easy with students won't work, because they take advantage of it." Another said: "A strict teacher sets a good example to the students by teaching them to be prompt and accurate. An easy teacher causes the students to become negligent." Another boy's teacher was strict and thorough, "still," he said, "the scholars had all the respect for him that young people are capable of." A girl of 17 said: "Many have argued that pupils judge their teacher by the easiness with which they may avoid doing their lessons. But let me say that the majority of the sympathetic teachers whom I have had have been those that from day to day have required that their lessons be prepared. But I do not mean the teacher who when the student says that for some reason he has been unable to prepare any particular lesson, look at him as though he were a future embezzler or forger." Another girl said: "From the time I entered the high school until now, which is my fourth year, one teacher has appealed to me more than any of the rest. She is of a very forgiving nature, but at the same time quite stern. She is also exacting in her requirements but always ready to sympathize with one in their trouble. She is never in too much of a hurry to help a girl with a difficult lesson as some teachers are. . . . Of the many teachers I have had she has done me most good." Several said a teacher might be strict and still be sympathetic. Not a single favorite teacher was described who was said to be easy in his requirements of work.

Forty-six of the sympathetic teachers discussed (all described by girls) were said to be especially *inspiring*, *easy to approach* and the like, the last point receiving special emphasis. The teacher who is "distant," "cold," "reserved," "unsociable," is not a favorite with girls, but the one who "gets in touch with his pupils," who, in the language of a girl, "is one of us," is most helpful they think. "All other teachers," said a girl of her favorite, "seemed to be some one I could not approach in any way." The inspiration mentioned, and even the ease of manner so much admired, seem to be due, according to the thought of the pupils, to the strong attractive personality which they said all these teachers possessed. Not only did it make the teacher inspiring and easy to approach, it won for him the respect of his students and made it easy for him to keep order and to command.

A boy of 18 said of his favorite teacher: "To say nothing of having a strong character she has a wonderful personality. In the classroom she seemed to radiate enthusiasm and interest without any effort. Another teacher I had, tried with all her heart to make the recitation interesting but failed because she was too simple, too particular about unimportant things and lacked strength of character." The teacher who lacks this strong personality and strength of character, who does not command the respect of his pupils, is never a favorite. Another boy in describing his best teacher says: "This man meant what he said and so could impress it on others. In striking contrast to him stands another teacher who taught the same branch. He would tell

a pupil to do something and if he did n't do it he would simply let it go. He never enforced what he said and as a consequence hardly a pupil respected him. He was nice and easy to get along with but we did not learn much under him. He had no strength of character and therefore could not make others strong."

This "strong character" quality, was emphasized by 26. What was meant by the term was in most cases left indefinite. It was most often simply stated that this or that teacher had a great deal of strength of character for which he was admired. Some meant by it a true gentleman or a truly womanly woman. (Manly traits in a woman being especially disliked). Others meant by strength of character nobility, trueness, originality and the like.

"I think especially of one teacher," said a girl, "who is gentle, true and noble, who not only sees the fault of each individual pupil but recognizes their needs, who never fails to appreciate a student's efforts and encourage them, who is never too busy to smile when we meet her on the stairs." A boy of 17 said: "He was a gentleman in every sense of the word, always ready to aid his pupils cheerfully." Another boy said: "Personally he is a splendid type of manhood and in some way his personality always seemed to pervade a recitation and make it something to look forward to."

Twenty-six students mentioned the fact that their favorite teacher was *serious*, *earnest*, *rather dignified*, *unassuming*, *quiet* and the like, but in no case did they mean that they were reserved. The girl who said of the teacher she liked best, "She did not seem unapproachable like some teachers I have had," voices the general feeling towards the teacher who is reserved.

"I never felt frightened," said another girl, "when speaking to her and I was always at ease when in her class." "Although I have liked all my teachers except one," said a boy, "I think my favorite teacher is one whom I have this year. She is one of those you do not hesitate to ask questions, because she is always good-natured and never tries to make things disagreeable." The teacher who "flares up at you and tries to frighten you" is never a favorite, while a "calm, quiet" teacher is often admired.

A few favorite teachers were said to be *good*, *polite*, *courteous* or *refined*. "Her sweet disposition and gentle, refined manners," said a girl, "have caused her to be beloved by us all." Only two favorite teachers were said to be courteous and polite. *Hypocrisy* is especially disliked, while sincerity is highly commended. After describing certain qualifications which her favorite teacher possessed, a girl said: "She is not always smiling when she does n't mean it. She is rather serious, but always encourages a girl. If one has given up all hopes of mastering a certain study, she helps you so warm-heartedly that you can hardly fail to do your work well."

Lastly, the sympathetic teacher was described as wholly

unselfish and *self-sacrificing*. That is, what he did in school was determined not by his own interests and inclinations but by the welfare and needs of his students. Every student in some way or other emphasized this point. The great temptation for the high-school teacher appears to be to teach what seems theoretically important to be learned, or to dwell upon what is interesting for him to teach and discuss, instead of keeping in mind the pupils' interests and apperceptive needs. Scores of pupils dwelt upon the fact that their favorite teachers allowed much free discussion in class; and every one knows how ingenious pupils divert the teacher from uninteresting lessons to the discussion of what interests them. It was the teacher who assigned more work than his pupils could do, who forgot that they had other lessons besides his own to prepare, who saw everything in the subject he taught, and expected all sorts of impossible things, who put his own inclinations and interests before the interests and needs of his pupils, that was called selfish and said to be an "utter failure as a teacher." The pupils' favorite teacher is not a narrow specialist; he is never so much interested in his subject that he forgets their welfare and needs, but makes a studied effort to adapt all he does to their interests and abilities. Lessons, methods, programmes, system, order of work, daily routine and the rest, are all changed at a moment's notice if it is for the best interest of the students.

Summarizing the various character qualifications approved and admired we get as it were a composite photograph of what the pupils' favorite and most helpful teacher's character is. He was most often described as pleasant, cheerful, good-natured, jolly, witty, even-tempered, and sociable, *i. e.*, never unpleasant, of a critical turn of mind, a fault-finder, or a scold. Again he was said to be kind, forgiving, generous, never sarcastic, rude, harsh, nor given to ridicule, but patient, considerate, reasonable, thoughtful of the feelings of his pupils, never cranky, over-particular, or unreasonably strict, to be thoroughly unselfish, self-sacrificing, rather decisive, business-like, not easy in his requirements of good work, firm, strict, and the like. As a rule he possessed a strong character, had the power of self-control, was often described as noble, original, a true gentleman if a man, truly feminine and womanly if a woman. For the girls he must be inspiring, have a strong personality, be unreserved, easy to approach and the like. For the boys he must not be "overbearing," "proud of the fact that he commands," nor "consider himself as above or better than those he instructs." A few like a teacher who is serious, earnest, unassuming (mentioned only by boys), quiet, good, polite, gentle, courteous, refined, etc. (especially emphasized by girls).

Some of these qualities, no doubt, are matters of individual preference, and as such are vital only for certain individuals. Others are so generally admired that they seem to be fundamental. If what these students say has any weight at all we must conclude that the teacher's disposition and character is a much more important thing than is often supposed. Not only do they determine his whole general attitude, the first essential prerequisite to real helpfulness, but they determine practically everything he does, and literally become the measure of his degree of helpfulness. "Pupils expect as much from teachers and with as good right," said a boy, "as teachers expect from pupils. Any injustice, any meanness of spirit, anything in the least dishonest in the teacher's character is severely condemned, while any good quality is proportionately admired. This," he concludes, "is perhaps of little consequence to the teacher but of vital importance to the pupil." Every paper received bears out what he said, so we must conclude that it matters much what a teacher's character is. If he is habitually cheerful, pleasant, good-natured and the rest, he will not only have the right attitude towards life and the world but towards his pupils and his work, and be able to give his students the needed help. If, in addition, he is patient, considerate, thoughtful of the feelings of his pupils, reasonable and kind, he not only is always willing to encourage and help his pupils, but everything he does is done in a *manner* which actually gives the right sort of encouragement and help. If, now, in addition, he is thoroughly unselfish and self-sacrificing he makes the welfare and needs of his pupils the chief aim of all his best thought and endeavor and is, from the student's point of view, the ideal teacher, so far as character goes. But other than character qualifications were possessed by the favorite teachers described.

2. *These Qualifications Described.* The pupils' favorite teacher first of all fully *understands boys and girls.* In a recent address before the N. E. A. (Proc. N. E. A., 1903, p. 199), Prof. Ellis stated so clearly and concisely the most important known facts about the early adolescent development of the average high school boy and girl that I quote his words.

"The high school receives the adolescent youth, with a new and changing body, disequilibrated now by new and rapidly developing organs connecting him with the race, by a rapidly medullating brain, by new-grown heart muscles and heightened blood pressure; a creature with intense but fickle emotions; with a rising sense of self-importance; with vague aspirations and longings for great things; with new religious and social needs; with his love of activity for the mere sake of doing passing into a desire to do things having a real end; with the infantile sense of dependence and willinguess to obey mere authority yielding to a feeling of self-dependence and a desire to control himself—a changing, high-pressure, destructive-construc-

tive creature, now yearning for the unattainable ideal, now tingling with the desire to do things and to count for something in the world."

The helpful teacher knows that this is the case. He understands this unbalanced, many-sided, self-conscious, hopeful youth; appreciates how he feels; knows his impulses and needs; understands his motives and ways; looks at things from his point of view; truly sympathizes with him and is able to help him because he understands. So strongly was this qualification emphasized that the pupils' favorite teacher might almost be defined as the teacher who understood them best. In describing their various favorite teachers the girls say, on this point:

"She seems to understand us thoroughly," "to know just how I feel;" "to know what I need;" "to realize all my weak points;" "has a keen appreciation of a pupil's ability;" "recognizes the fact that some girls cannot learn her subject as easily as others can and treats us accordingly;" "understands when a pupil is making a failure from pure nervousness or illness and quietly helps them along;" "understood from the first that I was quick and impetuous and helped me overcome it;" "seemed to put herself in my place and to sympathize with me which made me feel as if the battle were half won;" "thoroughly understood girls;" "seemed more like one of us than a teacher and entered into our joys and troubles just as if she knew how we felt;" "had a keen appreciation of a girl's character, knew their every emotion and thought and the very impulses which prompted them to do as they did;" "never forgot that she was a schoolgirl once herself and had her trials and escapades and, therefore, never judged a girl before she had looked at the matter from her side." "He understands what you cannot quite comprehend and knows just how to explain the difficulty;" "understands the things in me which other teachers did not;" "had the power to look into our minds and hearts, as it were, and to see all our needs and defects and so knew better how to help us than anybody else." Several girls said: "The teacher you can tell your sorrows to appeals to us most."

The boys are either harder to understand than the girls or else they are more sensitive on this point. Nearly every boy had at some time in his high school course found a truly helpful teacher of whom it was said:

"He fully understands me and therefore appeals to me;" "thoroughly understood my interests;" "could tell what prompted me to do as I did;" "knows just what the defects of different pupils are;" "fully understood boys, seemed to have a knack for understanding a boy's ways and needs and to have the proper regard for the feelings of his pupils;" "had been a boy once himself and therefore knows just what you need;" "seemed to know our very thoughts and therefore was able to help us over the rocky places in school," etc.

Many of these very boys, however, in the same paragraph in which they discussed their favorite teacher used expressions like the following:

"Few if any teachers really understand boys;" "few teachers are able or willing to read pupils aright" or "many teachers try to understand us but few succeed." "I have met a few sympathetic teachers," wrote a boy, "but the majority never think they ever were boys and

view everything as old men." Another boy said: "I have no doubt that most teachers wish to be sympathetic as possible with their students but it seems to me that only a few begin to realize the difficulties under which individual pupils are laboring." A number declared that: "No teacher in the school ever understood them though most of them thought they did." The boys not only seem to be less understood than the girls but to demand it more.

The importance of this qualification was often incidentally discussed. The boy who said: "If teachers knew their pupils better they could be of more help to them," has stated what the pupils all think. Only one or two of several hundred quotations can be given.

"When I entered the high school," writes a boy, "I soon became acquainted with the teachers and found that there was a great difference between them. Some were patient with me if I did not understand them or the situation, while others would instantly become nervous, impatient, and cross if subjected to the same conditions. Some seemed to understand me, knew how I felt and sympathized with me, while others did not understand me at all and would not look at things from my point of view to ascertain why I thought or did as I did. I have found," he adds, "that I always try harder and accomplish more if a teacher understands me and tries to make my school life pleasant and profitable than I do for a teacher who does not sympathize with me." "What we get from the high school," writes a girl, "depends upon the teachers we have. There was one teacher in particular who seemed to thoroughly understand her pupils. I was always glad when it came time to recite to her. She made me feel so at home that I was not afraid to speak out all I felt. She trusted me and believed in me, and to her, at least, I was not a hopeless idiot. I had another teacher, however, who had quite the opposite effect. He was a splendid teacher and I learned something from him, but the process was so painful that I shall always shudder when I look back to it. The man was naturally nervous. I never remember having seen him when he was not in motion. His laugh was the most unpleasant laugh I ever heard. He trusted nobody and sympathized with none, and it seemed to give him pleasure when our marks registered low. Yet I believe the man meant well; the trouble all lay in the fact that he did not understand boys and girls." Another girl, speaking of her favorite teacher, said: "She seemed to thoroughly understand and appreciate the pupil's point of view. As a result there was n't a pupil in the school that would n't do anything she asked them to do and think it a pleasure, where otherwise it would have been considered a very hard task."

Not only must the teacher understand his students, the pupils must understand the teacher as well. Many discussed this point in detail and pointed out the great need of this mutual understanding and the evil effects which follow if a misunderstanding on either side occurs. The favorite teacher is always understood. As the pupils put it: "He is more like one of us than a teacher," "one of the boys," "a friend," never a policeman or a mere keeper of school. If the pupils are right, no teacher can be truly helpful to them unless he brings about this mutual understanding. If a teacher is not

in perfect sympathy with his pupils, does not know the real significance and importance of adolescence and is not on free and intimate terms with his students he is not a fit teacher for the high school. He will fail to adapt the methods of discipline and instruction to the ever-differing nature of his pupils, try, perhaps, to adopt a college method in his teaching or an elementary-school method in his discipline, mistake perversities incident to development for evil intentions or marks of degeneration in his pupils, try to force various premature acquisitions on his pupils because of his own interest in these things, and, worst of all, he is almost sure to be in continual conflict with his students. The favorite teacher naturally does the right thing in the right way because he understands boys and girls. He is content with the slow process of normal development and willing that pupils should be boys and girls before they are men.

Young. Again, the favorite teacher was described as *enthusiastic, energetic, young.* This qualification is closely related to the one just described. In fact most pupils think that only young teachers are capable of understanding them. Several said in so many words that high school students preferred teachers who were young. Only two of the favorite teachers described were old both of whom were said to be "as young at heart as any girl in the class," while 72 pupils especially emphasized the fact that their favorite teachers were young. In describing these teachers the following expressions were used:

"He seemed to be one of us;" "was one of the boys;" "still remembered his boyhood days;" "remembered that he was young once himself and still seemed so to us;" "seemed to feel with the girls;" "to know how pupils feel about certain things and never forgot that she was young once herself and couldn't help having a little innocent fun once in a while;" "he looked at things from our point of view;" "placed himself in the pupil's place;" "a fellow could talk to him just as he would to one of the boys," etc., etc. A favorite way of pointing out the difference between sympathetic and unsympathetic teachers was to say that the latter "did not seem to realize that they ever were young and viewed everything as old men." As might be supposed this intimacy with pupils, so much admired, does not cause a loss of respect. A boy said of his best teacher: "He was young, and in a group of boys a stranger could not tell the teacher from the scholars but, notwithstanding, he commanded great attention and respect. In fact during the year I was in his class I never heard him have to call the class to order once." Many other pupils spoke of the respect students have for teachers who are on intimate terms with them. One boy said: "He was one of us but we felt more respect for him than for those teachers who relied on their own vigorous efforts to keep order."

Old teachers, as a rule, are disliked.

"I think," said a girl, "an old teacher should not be allowed to teach, because she is cranky and does not inspire her pupils as a young teacher does." "We all must grow old," writes another, "but

I do think some teachers have grown too old to teach. This may seem hard on them but it is the old teacher that we find it hard to get along with. They have taught for years and years and know so much about their subject that they get all out of patience with any one who cannot answer right up." "I think," said a boy, "that when teachers get old and crabbed their places should be filled by younger ones. They have had their turn and ought to give up their places to a younger person who can sympathize with young people and does not look on their natural fun as childish or as an insult against themselves." Another boy said: "Older teachers do not seem to realize that methods of teaching as well as times have changed and so keep on teaching in the same old way year after year. It is needless to say that the pupils suffer by this." Several said: "If the teacher is energetic, sympathetic, and young, the pupil is much more likely to succeed than he would be with an elderly teacher who has lost all sympathy with youth."

This qualification was emphasized in still another way. Many pupils in suggesting improvements for the high school (point 10 of the syllabus) strongly urged the getting rid of all old teachers and replacing them by young teachers who were strictly up to date, interested in their work, and thoroughly in sympathy with their pupils. A girl of 17 said:

"There is but one improvement which I would suggest, that is not to employ aged teachers, for when one gets along in years they cannot sympathize with the younger sex and cannot interest themselves in the things which appeal to young folks. Old teachers may be competent to teach," she adds, "but I believe they wholly lack that spirit, enthusiasm, and sympathy with youth so necessary for the welfare of the pupil." A boy writing on the same point says: "Some of the teachers need waking up so they will employ newer methods in teaching instead of getting into a rut and teaching as they have taught for the last fifteen years."

It should be stated, however, that the pupils did not mean by old and young a mere age distinction in the ordinary sense. According to them some teachers have never been young, others never get old. Being young in the student's own words means to be enthusiastic, full of life, up to date, thoroughly in sympathy with young people and their ways, to know how they feel, to remember how things appear to them and the like. "I don't think," said a girl of eighteen, "that high-school teachers, as a rule, are very sympathetic, for they never look at things as we do. They look with eyes of thirty or forty-five, while we see things in the light of eighteen." Being young is to have the knowledge and experience of thirty or forty-five with the faith, hope, and "eyes" of eighteen. It is to remain a learner and an adolescent all one's life. To be old is to be cranky, pedantic, old-maidish, behind the times, out of touch with the young, impatient and cross, to become indifferent, suspicious, didactic, set in one's ways, more and more the creature of habit and the slave to one's yesterdays, to lose interest in one's work and finally to

reach a sort of static condition where one ceases to grow and gets fat. The teacher who was described as quite an old lady, but at heart as young as any girl in her class, who was up to date in her teaching and knew just how a girl studied her lessons, her ideas about clothes and all her likes and dislikes, was young in the sense the pupils used the word, although she had taught in that school for over thirty years.

Interested in Work. Again, the favorite teacher is interested in his work. He never permits his interest and enthusiasm to lag. As one pupil expressed it: "Her whole heart and soul is in her work." One favorite teacher taught because he "loved the work, not until he could get married, as so many women do." Another "was interested in the class work herself and used all her efforts to make the work interesting to us." Another, "always took great interest in everything her pupils asked her about."

"Who can feel a pride in his work," said a boy, "when one's teacher begins the lesson indifferently and with a bored air? A teacher who keeps the lesson in narrow bounds," he adds, "and seems glad when it is over is never a favorite." "Ask ten pupils," said another boy, "which teacher they prefer, the one who enters into the subject with enthusiasm and life or the one who is indifferent and does not care how the lesson goes, and they will firmly stand by the first. The hour passes quickly with him and many interesting and important subjects are discussed. With an indifferent teacher one does not care to ask a question, fearing the wearied expression on the teacher's face and the 'you ought to know that' sort of air which always accompanies his answer." Another boy said: "A teacher who seems absolutely uninterested in his work never inspires students with enthusiasm or gets the best work from them. But if a teacher will show some interest in his pupils and his work, that teacher will not only gain the respect of his pupils but make them want to do their best work for him."

Scholarship. Another essential qualification of the helpful teacher is that of scholarship. No favorite teacher was described who lacked this qualification, while thirty-five teachers were especially commended for their "thorough knowledge of their subject," "their wide experience," or their "broad and accurate scholarship." Other things being equal the scholarly teacher is the favorite. What the pupils most seriously object to is scholarship divorced from common sense, mere scholarship without the ability to teach, or scholarship without those fundamental virtues which we all admire. The following phrases were used in emphasizing this point:

"She was a woman of excellent ability," "was broad-minded," "possessed a fountain of good common sense," "was far seeing," "extremely bright," "understood what she taught and made you understand," "was thorough," "had a broad and accurate scholarship," "a keen intellect," "always did her work well," "always knew what he was talking about," "had such a perfect knowledge of her subject that

she could not help making it clear," "knew his study thoroughly," "was intellectually bright," "thought and read a great deal which made her broad and sympathetic with all conditions," etc., etc. "Of all my teachers," said a girl, "the memory of one will outlive that of all the rest. It was not her character that attracted me, although that was strong enough, not her manners, although her ways fascinated me instead of calling forth my anger as the rudeness of so many teachers did, it was her intellect, her general knowledge that attracted me. There seemed to be nothing in her own or related subjects that she did not know. Every day after a talk with her I was filled with ambition to know more about this or that subject, and it was due to her that I did as much as possible to learn about these things." Of another favorite teacher a girl said: "She was never asked a question which she could not answer immediately, or tell you where you could find the answer to it."

The narrow specialist is never a favorite. "Some teachers," said a boy, "are wedded as it were to their subject, and are narrow minded enough to think that, regardless of the aim of the pupil, their particular subject above all others is important and should be mastered." Several said: "Their favorite teacher did not even know the meaning of narrow-mindedness."

Mere scholarship, however, is not enough. The helpful teacher knows how to impart to his pupils what he knows himself. By this ability to teach, the pupils did not mean, however, certain refinements of method, particular ways of presenting certain subjects, they meant that the teacher had the power to explain the ability to make the work interesting and seem significant, and could adapt it to the interests and capacities of his pupils.

"Even if you think you don't know your lesson," writes a boy, "he picks it out of you in such a way that you never forget it." Another boy said: "He explains things in such a clear way that no one can help but understand it." Another favorite teacher in explaining a difficult subject seemed to be able to give just the hint that enabled the pupil to surmount the difficulty. "Our most sympathetic teacher enters into his work with a zest," said a girl, "that is truly surprising. When he stands before his class he seems to permeate the whole atmosphere with his own earnestness and pleasure in the work, and everybody works as hard as they can to obtain the desired results. I think the secret of his success is that he makes his work personal, places himself on a level with the pupil and works the whole situation out with him." Another girl, after discussing the importance of a pupil getting started right in his freshman year, said: "If I had had a teacher during the first half of my high school course who could have given clear explanations himself, and who had understood how to make me understand (for that is what a teacher is for) I would have been saved much discouragement." These few quotations are typical of what the pupils think and show that it is the scholarly teacher, who at the same time knows how to teach, that the pupils select as their favorites.

The Teacher's Sex. No definite sex qualification was made although a number of things bear directly on this point. Out of the total number of students represented in this study 578 described some particular male or female teacher which they had

had in the high school. 161 of the remaining 303 were not asked to state the sex of the teacher described, the rest failing to do so. Of the 578 who stated the sex of the teacher described, 125 (32 boys and 93 girls) described a man as the best teacher they had had in the high school, while 352 (38 boys and 314 girls) described a woman as the most helpful teacher they had had. Only a few, 21 boys and 80 girls, described the worst teacher they had had. 33 of these unsympathetic teachers (described by 6 boys and 27 girls) were men; 68 (described by 14 boys and 54 girls) were women. That is, both boys and girls described twice as many unsympathetic female teachers as men. The girls described nearly three and a half times as many favorite female teachers as men while the number of favorite teachers described by the boys was about equally divided between women and men. According to the report of the commissioner of education there were in the schools represented, in 1902 (when these pupils were in their second year), 90 male teachers and 174 female teachers which makes the chances in favor of a female teacher being selected about two to one. So the fact that twice as many unsympathetic female teachers were described as men probably has no significance. That the boys described as many favorite men teachers as women when the chances were two to one in favor of their choosing a woman, and the fact that the girls described three and a half times as many favorite female teachers as males when they should have mentioned only twice as many, is significant and seems to indicate that the girls prefer women teachers while the boys prefer men. A number of the girls in their discussions, however, expressed a decided preference for male teachers. One girl said:

"I have only had three men teachers in my life but I can't help saying that I prefer women teachers." Another girl said: "Women as a rule understand young people, especially girls, better than do the men." Another girl thought that "female teachers were more sympathetic towards the girls and men teachers towards the boys." All the rest who discussed this point spoke strongly in favor of the men. "All my teachers," said a girl of 16, "have been kind but I do think gentlemen teachers have understood me best." "I do not know," said another, "of any very sympathetic teachers but I do think men teachers are the best. They show less partiality and are not so particular about little things." Another said: "I like men teachers in the high school better than women. All I have had have been inclined to be more sympathetic than any woman teacher I ever had. Women teachers are apt to be partial and cranky while men are the same to all their pupils." Another writes: "No woman teacher has seemed to take any interest in me while one man in particular always seemed to understand me without my explaining just how I felt. If I could have had him in all my studies I should have been a much better scholar than I am." "Masculine teachers," said another, "seem less sympathetic than women but they impress every subject on your mind more and you soon forget their sternness." The following quotation is typical of what many said. "One of my studies the first year I was in

high school," said a girl "was algebra. In this subject I had a man teacher the first one I ever had. As I was not accustomed to have a man teacher I was very timid at first, but my timidness soon wore away and I learned to like him very much because he was always willing to help me and was not apt to become impatient and cranky as women teachers are."

Although practically everything that was said on this point is in favor of male teachers, we cannot conclude from the facts at hand that they are more helpful for pupils at the high-school stage, or that they are generally preferred. True helpfulness seems to depend not upon the teacher's age and sex but upon the qualifications and qualities of character possessed. According to the students' reports, either sex may be truly helpful to both boys and girls. Nevertheless, the facts and quotations cited above are significant. Male teachers *may* possess more of the characteristics, which high-school students find helpful and admire, than female teachers do. Especially does this seem to be true for the boys, but nothing conclusive can be said on this point.

Appearance. No appearance qualification was made. The appearance of only a few favorite teachers was described, and these in every case were said to be homely but model teachers nevertheless. In all other cases, where the teacher's appearance was mentioned at all, it was only referred to in a general way by the use of some such expressions as these: "He was of commanding appearance;" "Had a strong personality;" "By his very appearance he commanded obedience and respect;" "She had an attractive personality which made it easy to approach her;" "He was a man of commanding appearance, stately and tall," etc. No one said their favorite teacher was handsome, beautiful, neat, attractive, good-looking, and the like. So it would seem that the appearance qualification so strongly emphasized and demanded by pupils in the lower grades, as brought out by the study of Kratz, (13 p. 414) is not so important at the high-school stage. Important as a teacher's manners and appearance are, high-school students seem to look deeper than these mere surface things, and while it may be said that the nature of the exercise was such as would hardly call for a full expression from the pupils on this point, still the fact, that not a single pupil mentioned a teacher's appearance as a necessary or even important qualification, while Kratz found neatness and appearance the most important qualification of the favorite teacher for pupils in the grades, is significant. High-school pupils seem not only to appreciate but to be accurate judges of a teacher's real worth.

To state the requisite qualifications of the pupils' favorite teacher in a word we may say, 1. That he possesses the traits of character described in Section 1. 2. That he thoroughly

understands boys and girls and is in perfect sympathy with them. 3. That he is enthusiastic and young. 4. That he is interested in his work and is never indifferent. 5. That he is a scholar and student and knows how to teach. The matter of appearance and sex was in every case made subordinate to these.

3. *What the Favorite Teacher Does. His General Attitude.* The one thing for which all students yearn is encouragement. Every pupil strongly emphasized this point. "Instead of continually telling a pupil of his faults," said a girl, "the teacher should speak a few words of encouragement. It takes but little to satisfy one's longing for well-merited praise and those teachers who never inspire a hard working scholar with a word or two of hope and cheer are utter failures of what a teacher should be." "I do not think it right," said a boy, "to have a teacher condemn a pupil before the term is half over telling him he had better give up, that he is a failure. If some teachers were a little more patient and would give backward students a little encouragement they would find them more apt to learn. In my experience I have always succeeded best with the teacher who gave me some encouragement." The following sentences are fairly typical:

"To know," said a boy, "that I would have the sympathy and help of the teacher if I should fail after I had done my best, has often given me new zeal to go on." "One teacher," said another, "especially encouraged me and I worked harder for him than any teacher I ever had." "An encouraging word," said another, "always stirred me to greater effort." "Nothing helps a student more," said another, "than to know that the teacher is in sympathy with her aud that she realizes the difficulties that have to be overcome in school life. I have heard teachers say in speaking to a scholar who has not succeeded in passing an examination, 'you have no one to blame but yourself. It is not my fault.' While perhaps it has never entered the pupil's mind to blame the teacher at all. If instead of this discouraging speech the teacher would say nothing at all, or better, if she would give some encouragement, it would be a great help to the scholar. On the other hand I knew one teacher, who always showed an interest in the welfare of her pupils. When she was reading our grades in an examination she would always tell those that succeeded that she was glad they passed the examination, and to those that were so unfortunate as not to pass, she would always say: 'Well, you know you can have another trial, perhaps you will succeed then.' It is the last kind of a teacher that is the favorite in all schools."

Two hundred and eleven teachers were chosen as favorites chiefly because they were always ready and willing to give their pupils the right sort of encouragement. Of these teachers the boys said:

"He helped and encouraged me;" "when you fell below in your work he spoke to you in a very encouraging way;" "if you wished to make up some work he would stay after school and

aid you;" "she always showed me how I might improve;" "he always had time to speak to a pupil no matter how busy he himself might be." "Although she had lots of things to attend to she was always willing to help you out of your trouble without making you feel as if you were the most stupid thing on earth."

Similar expressions were used by the girls. "He is always willing to help you cheerfully without a bored expression on his face;" "gives you a little encouragement when you are working hard at a difficult task;" "greets you with a kindly smile or word wherever she meets you;" "nothing is too much for him to undertake if it will help us along;" "he is always planning things which will help us when we leave school;" "if the girls have several long lessons any night she makes her lessons as easy as possible;" "she tells me in such a kind way when I am not doing as well as I might that it always encourages me;" "she understands my failings and points them out to me in such a way that I can correct them;" "she assisted me in my work when I was ill;" "gave me helpful little talks which developed my character;" "always seemed ready to listen to me when I had any difficulty;" "gave encouraging words to a weary and discouraged student;" "never gave one the idea that she was too busy to answer a question or acted bored and worried when asked to explain a subject;" "if my work was poor she said so but always with a word that helped me to try harder next time;" "she is always ready to come early and late if by so doing she can show us a kindness," etc., etc.

Just how this needed encouragement and help was given was not stated in every case, but the thing upon which all are agreed is, that it is the pleasant, cheerful, optimistic teacher who encourages his pupils most. To use the students' own words, it is the teacher who "always has a pleasant smile or remark for you when you pass her in the halls," who "always had something pleasant to say to you when you entered her room," who "entered into her pupils' fun with a vim and seemed to enjoy it," who, "wherever she went, always seemed to leave a little of her happiness behind," that is the general favorite and able to give the needed encouragement. A number of specific things were said to be especially discouraging. A girl of 18 said:

"It is always discouraging for a teacher to say "It is immaterial to me whether you finish the subject or not." Another said: "No student can study when a teacher is cross or continually tries to show him how stupid he is." The same thing was often stated in a negative way. A boy said: "She did not make you feel that you knew absolutely nothing and that she was looking down on you in very great condescension." "When I first entered his class," said a girl, "an entire stranger in the school, he didn't spring a lot of questions on me at once, but gave me a few days in which to become accustomed to my new surroundings. By calling me by my given name he made me feel at home but he did it in such a quiet way that it did not seem familiar. When I made a mistake in class he corrected it in such a way that it prevented my feeling humiliated and wanting to cry because I had been so stupid. He treats his pupils as his equals and talks with us as if we were as old and knew as much as he."

Treatment of Pupils. In all his dealings and intercourse with his pupils the favorite teacher is *reasonable*, *fair*, and *just*, even

patient and *kind*. Justice received special emphasis. Eighty-five of the sympathetic teachers described were especially commended because they were so fair and just. "He used me fairly," "was always perfectly square with me," "fair to all," "treated everybody alike," "had no favorites," "was impartial," "just in everything," "one of the fairest men I ever knew," "the same to every individual of the class," and the like expressions were used. As one boy put it, "All knew where to find him."

Much was said about a teacher being reasonable. The teacher who is unreasonable in his requirements of work is never a favorite. Of one favorite teacher it was said: "He makes us work hard, but does not cram us with work." Of another: "She makes us feel at ease and above all is not unreasonable in her assignments of work." Another did not make the lessons so short and easy that the pupils did not have to work hard, nor so hard that they could not get them, but was always reasonable. In fact, nothing was more seriously condemned in a teacher than this lack of consideration, assigning and requiring more work than pupils were able to prepare. One girl said of her favorite teacher:

"She did not think a pupil should know everything just as she knew it herself." Another: "She did not place me on a level with herself and think I ought to know as much as she, but remembered that I was a scholar and she a teacher." One girl said: "Frequently for some good reason one is unable to prepare a lesson, but some teachers think you should have found time. They are unreasonable, either not understanding the difficulties of the other lessons we have to prepare, or not considering them when giving out their own." A significant fact here is that nearly all who emphasize this point say they like a teacher who is not easy in his requirements of work. The unreasonable teacher seems to think that "the subject he teaches is the only one the pupil has to prepare and expects his students to concentrate on his subject above all others, whether he makes it interesting or not. Forty students said their best teacher "was considerate in all his dealings with his pupils," "never expected nor demanded impossible things," "adapted his requirements to his students' abilities." The following sentence is typical: "I once had a teacher," said a girl, "for whom it was a pleasure to do even hard, tedious work, because he never seemed to expect impossibilities from us; but he always gave us plenty of work and expected us to do all we could do."

Another point brought out in the favorite teacher's treatment of pupils is that he allows for individuality. As a boy of 17 expressed it: "A teacher who treated our class of thirty not as thirty machines but as thirty pupils with different dispositions, natural inclinations, handicaps in health, etc., was my favorite."

"I have had one teacher in particular," said a girl, "who was very sympathetic with his pupils. He kept in touch with them, studied them, remembered the personality of each and did not treat them as

a row of sticks. He made allowances for different dispositions, realized that the study was harder for some than for others, that some pupils had more work to do than others and therefore did not expect the same sort of work from every one. When we did not know our lessons he did not act in an indifferent sort of way, but made us feel as if every time we failed it offended him personally. I hardly need to say that we seldom failed." "Many teachers treat all scholars alike," said another, "in fact they treat them as so many machines. Perhaps this is unavoidable in a school like this where the classes are very large. However, a teacher can to some extent, at least, adapt himself to the different pupils. The one who does this is the one that is liked."

In the second place the pupils' favorite teachers have confidence in their students, put them on their honor, believe in them and trust them. Of more than fifty favorite teachers was it said: "He trusted me," "had confidence in me," "appealed to our sense of justice," "made me *feel* she trusted me," "put us on our honor" and the like. "Let a pupil see" said a boy, "that you believe in him and he will seldom disappoint you." Another boy, after discussing various qualities and acts of his favorite teacher writes:

"He was not continually spying upon us but put us on our honor. He said if a pupil wanted to cheat they would do so regardless of the teacher. Thus he achieved better results than those teachers who are so very watchful, for very seldom did any one abuse his confidence. It made us seem men and women to be put on our honor." Of another favorite teacher it was said: "If during an examination he is called from the room, he will rely upon our honor and not send some one in to see that we do not cheat. This is a very wise plan for during his absence no cheating is done."

As a few investigations have shown (17, p. 795) and as every experienced school man knows more teachers fail in the high school because they cannot govern their pupils than from any other one cause. No more fatal mistake can be made by a teacher than to try to adopt a primary school method of discipline in the high school. The teacher who attempts it is never a success. He is first disliked, then tormented and worried as much as possible, and eventually despised by every pupil in the school.

"I have been very fortunate in having good teachers in the high school," said a boy, "but one teacher I had last year seemed to like a primary school method of teaching instead of a high school method. His reason was that the fellows acted as primary school children. If they had been treated like high school fellows they would have acted quite differently." "I think," writes a girl, "that if a teacher places some trust in the scholars and asks them not to do such and such a thing she will have a great deal more power over them than if she keeps constant watch over them and tells them they must do this and must not do that." Another girl said of a certain teacher: "She had perfect trust in us and even those who cannot ordinarily be trusted feel that since one puts so much confidence in them they must be worthy of it." Another girl said: "If you asked to be excused from

a lesson and gave a reasonable excuse she would place herself in your position and not ask a dozen questions concerning it. She had entire trust in her pupils and therefore was liked and the year spent under her direction was a pleasant one."

The whole matter of suspicion comes in here. Of a teacher very much disliked a boy writes:

"She seemed to think it necessary that you should swear to everything before she believed you. When a teacher is like that a fellow does not feel like helping her." Another boy writes: "Most scholars if they feel that one trusts them feel very low and sneaky if they do anything wrong, while, on the other hand, if a teacher is always afraid that a pupil is going to cheat and treats him as though he thought he could n't trust him, the scholar is very apt to live up to the teacher's trust. That at least, is the way I feel about it. For instance, in an examination I took not long ago the teacher said he was going to the library and wanted to know if there were any questions before he left. He went and no cheating was done. If any one had cheated they would not only have been sneaking but would have felt sneaking. This same teacher seldom watches us during an examination but usually reads or does some writing during the time. This leaves the scholars on their manhood and makes it so they can cheat very easily, but there is less cheating in his class than in any other class I know of. In one or two classes I am in, the teacher is always walking around to see what cheating can be found. In her classes the most cheating is done and worst of all nobody feels sneaking about it." Then after giving two concrete cases where, as he thought, the manhood of the boys had been violated (which he said always angered the boys very much), the same boy concludes with the sentence: "After thinking about all these different events I think all must agree with me in saying that the best way to control and get along with high school students is to place them on their honor."

Every pupil who touched upon this point exactly agreed with the sentiment the last boy expressed. There wasn't in all the papers so much as a sign of a dissenting vote. No teacher can afford to neglect the suggestions the pupils have made.

Again it was said that the favorite teacher treated his pupils like young ladies and gentlemen, never like "babies," "mere children" or "pupils in a grammar school." The boy who said, "nothing is so humiliating to me as to be treated as a child," stated how the pupils all feel.

"There is a vast difference in the attitude of teachers towards their pupils," writes a boy. "Some treat us as high school students in a frank open way while others treat us more like grammar school pupils or with a superior air. I have had teachers of both kinds and I must say the first class is far better liked and have a much easier time of it." Another boy said of his favorite teacher: "He treats each scholar as a lady or gentleman, not as a person to be continually watched. I have had teachers," he adds, "who spent a good deal of time telling us that we were gentlemen and the rest of the time trying to catch us breaking the rules. I need not say that such a teacher is neither respected nor liked."

A thing which boys especially dislike is for the teacher to display his authority, or to continually make them feel that he

is their superior. Their ideal teacher is in every way their superior to be sure, but at the same time he is also "one of them," and "a leader of the boys."

"The teacher who helped me most," said a boy, "is Mr. —, who shows by his example both in school and out what is the gentlemanly way of living. He treats the fellows as though they had as much right in the world as he. What I most detest in a teacher," he adds, "is his carefulness to remind you that he has power over you and will use it at the least provocation." Another boy, after describing his best teacher, said: "Another thing which made a great many respect him, especially boys, was that when he was speaking to you he seemed to place you on the same level with himself and not as a pupil almost entirely under his control."

The girls insist that pupils must be trusted, put on their honor and treated like young ladies and gentlemen quite as strongly as the boys, and think with them that few pupils will break the trust a teacher places in them. However, on the question of a teacher displaying his authority a sex difference is noticeable. The girls do not seem to object so strongly to a dictatorial or authoritative attitude on the part of the teacher as do the boys. They like the teacher who, in the words of a girl of 19, "appeals not to our sense of helplessness but to our sense of honor," agree with the boys that such a teacher "makes some honorable who were not so before," and often say that "when a teacher trusts his pupils there is less temptation to cheat and do wrong than when the teacher is suspicious and thinks they are too bad to do anything good," but all their descriptions go to show that they are less jealous of the teacher's authority than the boys.

Ninety-six pupils especially liked the teacher who "took a personal interest in his pupils," who was not merely a teacher but a "companion," a "confidant," a "friend." Many girls said of their favorite teacher: "She is one of my very dear friends." Others spoke of their favorite teacher as "taking their interests to heart," as being "interested in everything his pupils did," as "always ready to advise them," as "interested in all his pupils' affairs."

One teacher seemed so interested and ready to help "that all felt free to speak to her about their lessons." Another appreciated all her pupils' work and was interested in what they were to do after they left school. Another told her pupils just how they had best go about studying the different subjects to be taken up. Another took such a personal interest in her pupils that she took the trouble to find out their natural abilities and something about their home lives. Another brought herself in close contact with all the griefs and troubles which beset her pupils, enjoyed their fun and was willing to do anything to increase their pleasure. Another, "by his interest and kindheartedness won for himself the respect and admiration of all his pupils." Another, "seemed to be as interested in her pupils' work as they were themselves." Another favorite teacher "thought of her classes as a num-

ber of individuals and took a personal interest in each, treating them as friends." A girl of 18 said: "While in the high school I have had one very noticeably sympathetic gentleman teacher whose cheery good morning, keen interest in your welfare, anxiety for an absent or sick member of his class, deep interest and sorrow at a student's failure in recitations or examinations, and continuous kind treatment, was an inspiring exhortation for every pupil to do his best. But, on the other hand, one of my lady teachers was so uninterested she did not recognize a pupil in the school building or on the street and showed little interest in our welfare. I do not speak unknowingly, for two pupils, a boy and a girl, are known to have left high school on account of her, and she so discouraged me that I have had hard work to continue in school and go on with my studies. It is the teacher who shows a personal interest in our work that we will think of after we have left school."

The most significant thing about this whole matter of interest is its dynamic quality. The pupil's favorite teacher not only possesses certain qualifications and qualities of character, he continually does the right thing. He is liked not so much for what he is as for what he does.

The girls, it seems, like to be praised when they do good work, but mere meaningless flattery is disliked.

"The surest way to understand a student is to show appreciation of his ability," writes a girl. "Even if he is not the brightest scholar, there is sure to be some one thing in which he does well. Every boy and girl has his or her forte. If the teacher is willing to see the good points in a scholar's work and then will not hesitate to praise him privately for his success, that scholar will always enjoy both teacher and school." Another girl said of her best teacher: "There was one thing for which I admired her, that was that whenever a pupil recited well he was always sure of a due amount of praise, which goes a long way with a pupil." Another girl said: "She seemed to know when I felt discouraged and would give me a pleasant word at just the right time which always made the world look brighter to me. When I was fretting about my physics she would tell me that I was doing better in physics which little praise made me work harder and succeed." Another girl said: "She required all work done thoroughly but when it was so prepared she was always willing to give the proper amount of praise and credit for it." The boys never speak of desiring praise and seem to be encouraged in a different way.

Teacher's Attitude Outside of School. The favorite teacher's attitude outside of school can best be stated in the pupils' own words. "She is the same in school as out;" "Takes an interest in us outside of school;" "Outside of class she talks about things that are of interest to me;" "Shows great interest in her pupils' friendships as well as in their school work;" "When out of school she talks to her pupils as if they were her equals in knowledge, which means a great deal to a bashful student;" "She often had talks with her pupils outside of the classroom;" "She was interested in what every scholar intended to do after they left school;" "She seemed to delight in knowing

just what interested each student most in her life outside of school." The following quotation is a typical one:

"After thinking of the various teachers I have had," writes a boy, "I have decided that a man about thirty years old was the most sympathetic. He is kind and considerate both in and out of school always ready to appreciate a joke in its right place but never allowing any undue confusion in his classes. When a pupil reciting became "rattled" he did not further his condition by "cracking" jokes at his expense and other methods which certain teachers use to try to add to the pupil's embarrassment. He never has such bad order in his classes as other teachers do yet he has the selfsame pupils to deal with. This is because outside of school he shows great interest in the doings of the scholars and freely mingles with them."

The Favorite Teacher in Class. In class the helpful teacher makes all the work interesting and enjoyable. He explains a great deal, suggests, leads, directs, works with his pupils instead of lecturing or demonstrating everything to them. He is original in his methods, the slave of no fixed ideas about what he should do, is strict and exacting in his requirements of good and honest work, yet reasonable in all his demands, keeping ever in mind what students are able and should be expected to do. He carefully distinguishes between the essential and the non-essential things and is never cranky, pedantic, over-strict, or too particular about little unimportant things. Sixty-one students especially emphasized the fact that their favorite teacher made all his recitations pleasant and interesting. Typical phrases are:

"He never allows a recitation to drag;" "Makes all lessons so interesting that they are looked forward to with delight, so pleasant that instead of watching the clock to see how many more minutes we have to stay, we wish it would last twice as long," so interesting "that we cannot help but listen to all that goes on, and are extremely sorry when the bell rings," "so attractive that I always feel awake and interested in her class." Of one favorite teacher it was said: "She made her subject the looked-for subject of the day." Another "threw so much ardor into her work that what was dull became interesting and what was difficult was conquered to please her." Many said: "I know from personal experience how pleasant and interesting a teacher can make a distasteful study."

Just how this interest in the work was aroused or what was done to make the recitation enjoyable was not in every case discussed. One girl said:

"Every day she brings a bright smile into class. Over the rough roads of knowledge she scatters funny stories and so makes the lessons we thought dull full of interest and life." Another teacher "made the lesson seem more like a very interesting discussion, in which every one was expected to take part, than like the reciting of a carefully prepared lesson, in which every one must have the same opinion on the subject or be wrong." Another "made many explanations and had many different subjects brought up during the hour which made the lesson less monotonous." Another "had a very

taking way about her." Another "presented the lesson each day in a different way." Another teacher's classes were made interesting "by her pleasant manner and method of teaching, her pleasing tone of voice, ready smile, and the clear, direct and pointed questions she asked." Another teacher "was always careful that pupils did not become tired of their subjects and made her lessons attractive by encouraging short discussions and permitting pupils to think for themselves."

Clear explanations, originality, much free discussion, the attitude and manner of the teacher seem to be the vital things in making the school work pleasant and interesting. The mere hearing of lessons or the method of asking set questions and getting parrot-like answers from the pupils, instead of stimulating them to think and work out the situation for themselves, was severely condemned. Only when the pupil is active and does the thinking, while the teacher is suggesting, guiding, and directing, is the recitation pleasant and interesting for the pupils.

From the foregoing reports of what the favorite teacher does we may infer that a teacher is liked more for what he does than for what he is. The pupils' favorite teacher's whole attitude is one of encouragement and helpfulness. This encouragement and help he is able to give because he understands boys and girls, because he is healthy, optimistic, patient, considerate, kind and just, because he treats his pupils like young ladies and gentlemen, instead of like children or pupils in a grammar school, because he trusts them, believes in them, allows for individuality, is specially interested in their welfare and work, studies them, is on intimate terms with them, makes his recitations interesting and enjoyable, suggests, explains, leads, guides, directs, in the pupils' own words because he does "what helps them most."

III. The Unsympathetic Teacher Described.

What was said about the 101 unsympathetic teachers described stands in striking contrast with the foregoing account of the favorite teachers.. These unsympathetic teachers were said to be the most unpopular, least helpful, worst high-school teachers the pupils ever had. They continually discouraged their pupils and were an actual hindrance to them. Instead of being liked and respected they were actually despised. In a word the description of the unsympathetic teachers gives us a yet clearer idea of what the ideal or model high-school teacher should be.

Their Character. In describing these unsympathetic teachers the whole vocabulary of evil connotation was employed. They were described as disagreeable, unpleasant, hard to please, nervous, irritable, suspicious, over-critical, too particu-

lar about little things, overstrict, cranky, quick-tempered, sour, curt, sarcastic, cross, harsh, overbearing, impatient, hasty, gruff, blunt, thoughtless, unreasonable, cold, haughty, distant, reserved, as easy-marks, as "too lenient or too easily worked," as "not being able to enjoy a joke," as "seldom laughing," as "chronic grumblers," as "always ready to ridicule, to make fun of a pupil's ignorance or to find fault," as "selfish," "unobliging," "indifferent," "caring nothing for the interests and opinions of their pupils" and the like. "I had a teacher once," said a girl, "who was as cold as ice; she was even correct; could not laugh at a class joke; thought everybody must stay strictly to the path of duty and never swerve; took no excuses and worst of all, seemed never to take your word for anything, but always looked at you with calm unbelieving eyes and was forever playing the policeman. Such a woman loses for me all interest and I can give her no respect." The quotation is typical and shows what an unpleasant teacher is likely to do.

One unsympathetic teacher "seemed forever to be watching for an opportunity to ridicule." Another "made the writer's most intimate friend cry day after day because she had been making a laughing stock of her before the whole class." Another always made some kind of remark "as to the dumbness of the pupils" when some one was called on in class for something she did n't know. Another, "by his cutting sarcasm always incited such fear that the writer if called on to recite could do nothing but blunder through the lesson no matter how well she had prepared it." Many told how pupils would refuse to recite because they would rather be marked zero on a recitation than run the risk of being ridiculed before the class or have the teacher make some sarcastic remark at their expense. One girl said of a certain teacher: "She was so curt and sarcastic that half the class, when they knew the answer to the question, hesitated to give it for fear of having a joke made at their expense." Another teacher was "so hasty and quick tempered that a large gap always existed between her and her pupils." Another "was a good teacher but too quick to accuse a pupil to be liked."

Over a fourth of the unsympathetic teachers were said to be extremely sarcastic. The student's question: "I wonder if teachers realize how sarcasm will do more to discourage a pupil than anything else?" is significant. One pupil speaking of a sarcastic teacher said: "If I had not particularly liked the subject she taught she would have killed every spark of interest I had." Another girl said: "No matter how carefully you prepared your lesson she would invariably make you stumble and then ask in a most sarcastic tone, if you called *that* a recitation? It is very discouraging to say the least."

Qualifications. The unsympathetic teacher first of all fails to understand boys and girls. Of most it was said: "They could not understand them," some "did not try." This, from the pupils' point of view, is a very serious defect. No qualifi-

cation, not even that of character, is so important, for no teacher can be truly helpful to his pupils unless he understands them and wins their confidence and respect. Hundreds of concrete cases of failure in this respect might be given, ranging all the way from the simplest cases of misjudging a pupil's ability through the cases where the teacher is wholly unable to look at things from the student's point of view and to understand their efforts and difficulties, to the most serious, and for the pupils tragic, cases of misunderstanding of their conduct, motives, individual peculiarities, natural defects, adolescent traits and the like, that could possibly arise. We can merely mention some of the more important ways in which pupils were misunderstood. There was first a class of teachers described who misjudged their pupils' ability, who, as one pupil put it, "think we ought to be just as brilliant as they," who "expect and demand from us all sorts of unreasonable things, because they have no idea of what a pupil should be expected to do." Of his geometry teacher a boy writes:

"She seemed to have no idea of its difficulty for me." Another teacher "was angered by a person of slow comprehension." Another "did not seem to realize that the study he taught was hard for me and that it was with the greatest difficulty that I got it." All cases where the teacher failed to understand the pupils' endeavors, thought they did not study at home because for one of a hundred reasons they could not recite well in class, where dullness was thought to be due to a lack of application and study, all misjudgments of ability and application were named and fully described. Several scores of teachers were described who were, to use the pupils' own phrase, "most unreasonable in assigning lessons." "If I should ever become a teacher," said a girl, "I would be as earnest as some of my teachers are to have the scholars do good work, but I sincerely hope that I would never forget that there are other teachers besides myself who wish their lessons done well. From the number of such teachers that were described it is safe to conclude that this form of selfishness, as it was called, is rather widespread.

Many cases of nervousness, timidity, sensitiveness, slowness of speech, lack of confidence and other adolescent traits were not understood by teachers of this type.

One pupil was nervous, the teacher thought it stubbornness. Another laughed because she was nervous, the teacher thought she did it to be noisy. Another had been of a nervous temperament since childhood and had great trouble in keeping still in school. "When not studying or listening to persons speak," she said, "I am very likely to get into mischief. Most teachers think it purely a love of mischief that makes me act so in school. In class if I don't happen to be particularly interested my thoughts wander and I am awakened from my dreaming by a lecture on inattention and lose my grade for that day." All forms of extreme sensitiveness, where a sharp word makes a pupil "perfectly miserable," where the pupil is "afraid to express herself fearing she will make a mistake," belong here.

One of the most general complaints made by the students was that they could not "put their thoughts into words," "could not readily

and quickly express themselves," "could not collect their thoughts when suddenly called on to recite," "did not have the words to tell what they knew," "could not make themselves clear," etc., etc. This many teachers did not understand. They took this inability to express themselves as a sign of ignorance or lack of study. One girl said: "I know what I want to say and how to say it but can't say it. The teacher thinks I don't know my lesson and regards me as little better than a dunce." "I have always been very nervous," said a boy, "and it has seemed to me at times as though I really had nothing in my head when teachers suddenly asked me a question. I might know my lesson thoroughly but I just could n't answer. I am all right if I can raise my hand and get called on in this way. It is the calling of my name I presume that frightens me. I have had two teachers both happening to be men who understood my case and were very kind and helpful to me. When I knew they understood me I seemed to do better."

Quite as often are the pupils' motives misjudged.

"One of the gentlemen teachers in the school," said a boy, "seems to think I am a hardened offender and do not intend to do right because, at times, I impulsively whisper and laugh. This is not true. It comes natural to me and I regret it as soon as I have spoken." "The teachers in high school," said another boy, "do not, as a rule, look upon the misdemeanors of the pupils in the right way. They take everything too soberly, and many cannot even enjoy a joke. Some, however, are not so over-strict, and the pupils have a great deal more respect for them than for a cranky one." A girl said: "When you are studying a lesson in school you often look off dreamily into the distance to think of what you are studying. Many teachers call this wasting time and lack of attention to your studies. When you try to explain they say they can tell whether or not a girl is really studying." One girl always blushed when anything went wrong and so deceived her teacher who thought she was guilty and often accused her of things she did not do. Many complained that teachers thought they were loafers and did not care for school or anything when they really did.

The following cases are typical of several hundred instances of misunderstanding that were described.

A certain girl had been cheating for months until it had become the common talk of the class. One girl told the teacher at the suggestion of her classmates, when she was curtly informed that her assistance was not needed in managing her class and told to attend to her own examination. Next day in class this teacher gave a lecture on tattling and hoped she would not meet another case of it in her class. A girl of 17 writes: "Since I have been in the high school I have come across but one teacher whom I consider a hindrance to me rather than a help. I do not think she means to be, it is only that she does not understand me. Quite often when called upon to recite, before I would have a chance to answer the question, she would give me a long lecture on the way in which I stood or on the position in which I held my book. By the time she finished talking all knowledge of the question would be gone and the recitation marked a failure. I think this teacher thought she was doing this for my good, but in many cases I would make a voluntary failure in preference to getting up and being made sport of for the benefit of the class." The opposite attitude was described by a boy of 18. "This lady (speaking of his favorite teacher) I think understood me as few teachers have. If

called on to answer a question when I could not at the instant formulate my thoughts she did not peremptorily tell me to sit down as some teachers have done, not seeming to care whether I could make my thoughts clear or not, but waited until I collected my thoughts and could say what I knew all the time. . . . ." "The teacher who understood me least and bothered me most," said a girl, "was a man who had from the first an idea that I was very lazy and never studied the subject he taught, and so antagonized me as much as possible. Of course I did the same by him as is the fashion of human nature in the pupa stage. I studied his subject as little as possible, annoyed him as much as I could, so, as a result, we were at swords points throughout the year. I once made an attempt to conciliate him and end the strife, but he thought I was only trying to be impudent and things got worse and worse."

One of the necessary qualifications of the favorite or most helpful teacher was that he was "energetic," "enthusiastic" and "young," "one of the boys." The least helpful teacher was often described as old, "old-fashioned," "old maidish," crabbed, cranky, crusty, and "out of date." Boys especially dislike teachers of this sort. One boy said:

"My most unsympathetic teacher was a crabbed old man who never showed a scholar what to do. . . . . He was universally hated and when he left there was great rejoicing." Another boy in describing his worst teacher, said: "Picture any crabbed old maid. . . . . It seemed that she always tried to pick my faults no matter how hard I tried. At last I gave up all hope and stopped school until she was married at the age of forty-six." A girl writes: "I don't think old persons can understand younger ones very well. Most of the teachers in our school are old maids and don't understand us. They wonder why we are overjoyed at having a holiday and think we should be sorry." Another girl said of a teacher disliked: "If a girl has a little life in her and likes a little fun she dislikes her." "Although the teachers in our high school," said a boy, "are considered very efficient, it seems to me that many of them have followed the same routine and taught the same studies in the same old way for too long a time. In fact many of them are too "old maidish" to have much interest in us or to do us any good. A few treat us like dummies and seem to think their only duty is to never fail to mark down the kind of lesson we recite."

Instead of being interested in his pupils and his work the unsympathetic teacher was described as indifferent.

One teacher "never seemed to care whether his pupils failed or not and often inferred that he got his pay whether we learned anything or not." Another was described as "too well satisfied with himself," as "caring nothing for the opinion of his class. When they complained he took it with a stolid indifference which only aggravated them." Another teacher "never seemed willing to tell you anything about your work outside of class and sometimes would walk out of the room when you were in the act of speaking to him. As a consequence pupils dreaded his classes and avoided them as much as possible." Another teacher "was wholly indifferent to his pupils, did n't give a snap whether you got through or not. Made such remarks as these: 'It 's immaterial to me whether you get through or not. It does n't affect me.' " "Another (indifferent) teacher in-

stead of correcting you when you got a part wrong in recitation sits there with an expression of 'well, I always thought you did n't know anything but now I know it,' and calls on some one else. Say what you will," this writer adds, "such teachers have a discouraging effect on their pupils."

In his treatment of his pupils the unsympathetic teacher discourages rather than helps. Instead of being pleasant and optimistic he is pessimistic and soured on the world; instead of giving the right sort of encouragement he scolds, grumbles, criticises and finds fault; instead of being reasonable, fair and just he judges his pupils "before he knows the facts," makes all sorts of impossible demands, misunderstands their motives and acts, is not only unfair but unjust; instead of trusting his pupils and treating them like young ladies and gentlemen he is habitually suspicious of every one, won't believe what they say, "goes about trying to find some one breaking the rules," treats his pupils like "babies," or "little children," or "pupils in a grammar school," "vaunts his power in their face," "noses around in other people's business," "treats his pupils as though they were mere machines." Only one or two typical quotations can be given.

One teacher "made pupils miserable because he laughed at their embarrassment." "Another teacher," said a boy, "instead of being helpful and inspiring me to do my best caused me to despise and finally give up my study simply because he never gave me any encouragement." Another teacher was of the solemn type and never gave her pupils any encouragement but daily told them of their faults which did much harm the writer thought, because, he said, "chronic fault-finding will harden any one." Another teacher always criticised and never gave a pupil an opportunity to express their own opinion, stating harshly when any difference of opinion came up "you are wrong." "He seemed to think," the writer adds, "that he was there simply to correct mistakes, not to help us keep from making them." Many teachers were described who would not trust their pupils. "I do not know why it is," writes a girl, "but I have one teacher who has never understood me. He is the only teacher that I can't do well with. He has never trusted me and he is the only person I ever knew that doubted my word. Whenever I have made a recitation to this man he has looked at me doubtfully, questioned me and occasionally asked: 'Did some one tell you?' I have never been able to find out why he does n't trust me, but I have learned that he is that way with many other pupils. Any one disagreeing with him is called 'ignorant' or 'impudent.'"

Again, in recitation, the helpful teacher makes the work interesting, enjoyable and clear, studies his pupils, leads, guides and directs them, actually showing them what to do instead of lecturing and demonstrating everything to them. He is original in his methods, easy to approach, on intimate terms with his pupils, strict and exacting in requiring good work, yet knows well what pupils are able to do and what he may reasonably expect from them. The unsympathetic teacher by

his very manner and methods of teaching makes the lessons hard, dull and disagreeable. He can't make the work clear, makes impossible demands, "reminds pupils of their faults when they are doing their best," makes them feel "ill at ease," "is continually inciting fear," "can't keep order in class," "makes fun of a pupil's ignorance," "ridicules before the class," "seldom laughs" and the like. One of the most common complaints made was that "the teacher did not explain things as he should."

One teacher was described as knowing his subject very well but as having such an abrupt way of dealing with those who did not perceive his meaning readily, that he was universally disliked. Another teacher "knew the subject she was attempting to teach herself but lacked the power to convey her understanding to others." Several teachers were especially disliked because "they could not control their class and furnished no inspiration to make one study." Over and over again it was said: "Her explanations were not clear enough." One unsympathetic teacher "taught her subject but nothing outside of it. Each day's lesson had to be learned off by heart. She taught the rules of the book as they followed, regardless of the nature of the pupil. Sometimes there were parts of the lesson that were not prepared because they were not understood; but even in such cases no encouragement was given. The pupil had to pay the penalty." The boy's statement that there are times when pupils, instead of being scolded should be encouraged, is significant.

IV. Influence of the Sympathetic and Unsympathetic Teacher.

In a recent study of "Why Pupils Drop Out of the High School" (*Ped. Sem.*, Vol. XI, p. 204), it was found that without being asked for a remedy the pupils said that good teachers, such as the favorite teachers just described, could do more than all other things combined to keep the boys and girls in school. It is because the teachers are not sympathetic that pupils lose interest in their studies, become discouraged and drop out. The same students who described their best and worst high-school teacher as presented above, discussed at great length the ways in which the high school had helped them most (Point 2 of the Syllabus). The benefits derived were so great and so lavishly described that it would be a lasting consolation to any teacher to read what the pupils wrote on this point. The good received can in almost every case be traced directly to the influence of certain teachers in the school. Again the discussion of the fourth point of the syllabus (some points in which I have been misunderstood), by the same pupils, is a long story of the mistakes their teachers had made and the evil effects resulting therefrom. In a preliminary study two hundred first and second year high-school students in a certain school were asked among other things to name their favorite study and the one they most disliked, telling why in each case.

Their answers bear so directly on the matter of the teacher's influence that the results are given in full. 136 disliked certain subjects because they were "uninteresting" or "hard to understand," 28 because they "disliked the teacher and the way he taught," 14 because that particular subject was "so difficult and required such hard work," 14 because they "thought it useless or of no use to them," and six gave no reasons for their dislike. 101 of the 200 pupils in this school were studying a subject which is usually considered a favorite with students, but out of these 101, 63 or about 62.5% mentioned this subject as the one they most disliked. They all had the same teacher in the subject, who clearly was the cause of the dislike. 22 out of the 63 gave no other reason for disliking it, than: "Don't like the teacher," to which was often added, "he is snappy," "liable to scrap you any minute," "accuses you of things you don't do and puts his questions so you can't understand," "is not agreeable to be around," and the like. Other reasons given were: "Teacher does not make plain what he tries to explain;" "can't understand the teacher's questions;" "would not dislike it if we had a teacher we could understand;" "hard to understand the subject and the teacher;" "the teacher scolds;" "teacher is no account;" "teacher does not make himself understood;" "we can't go deep enough into the subject, for if we ask any questions they can't be explained so they can be understood;" "can't get interested in it on account of the teacher;" "I might like it if I had a teacher;" "a set of dry facts;" "not taught right;" "can't understand it;" "not interesting"—so all the reasons run. In describing their favorite subjects 78 per cent. of these 200 pupils liked certain subjects because they were pleasant, interesting and could be understood. Many said they liked a certain subject because they liked the teacher so well. So it would seem that whether a pupil likes a study or not depends more upon the kind of a teacher he has than on anything else. Again the chief improvement suggested by the pupils, the one most emphasized (Point 10 of Syllabus) was the need of more sympathetic teachers in the school. The other improvements suggested were such as these teachers would naturally bring about. From these facts it would seem that, compared with the faculty of a school, every other element is of relatively little importance. The sympathetic teacher causes his pupils to take an interest in school, inspires them with a desire to do more and better work and has an influence for good which can only be described in the pupils' own words.

This Influence Described. Most students introduced the description of their ideal teacher by such statements as these:

"Teachers have more influence upon their pupils than any one knows

or than they realize themselves;" "In getting an education the teacher is the all important thing;" "The teacher is responsible for the progress a pupil makes in school;" "What we get out of the high school depends upon the kind of teachers we have;" "A teacher has much to do with whether a pupil likes a study or not;" "If a pupil has a teacher who does not understand him he becomes so discouraged that he loses all interest in her work;" "In order to succeed you must have a teacher who is interested in you and gives a bit of encouragement once in a while instead of always taking your answers as a matter of course;" "Nothing helps a student more than to know that the teacher is in sympathy with her and realizes the difficulties that have to be overcome in school;" "The best way in which a school can help its pupils is by providing sympathetic teachers."

These general statements in themselves are meaningless but when we remember that each one of them and hundreds of others that might be given were the introductory statements to the description of some favorite teacher the pupil actually had and which he goes on to describe as illustrating the thought expressed in these sentences they become significant. A few typical sentences will indicate the regard in which the sympathetic teacher is held and something of the influence he exerts.

"She was loved by every member of the class and will always remain as the shining star of our high-school life;" "She made me want to learn;" "If there were more teachers like her boys and girls would hate school less;" "I regret that I could not enjoy her teaching longer;" "Whenever I have talked to her, if only for a moment, I always feel more like doing my best;" "I think I can safely say that no teacher ever has been or ever will be to me what she has been;" "A dozen words from her touched me more deeply than fifty from any other teacher I ever had. "She was so pleasant," said a girl, "that when I thought early in the morning of going to her later on, I always felt happy. When I entered her room, her pleasant smile always made me ready to do anything. Even a difficult passage seemed an easy one when she taught us. If I got up and did not understand that particular part of the lesson she would explain it and I really believe I never omitted to get a lesson for her, was never absent from her class, and most wonderful of all I was never spoken to for talking."

Influence on Character. The favorite teacher is the student's model and has a moulding influence on his character and life. "I believe," wrote a boy, "a teacher influences a pupil more than a whole curriculum of studies. They unconsciously mould our characters and we imitate them though we are not aware of it." "This teacher," said a girl of her favorite, "has more influence over me than any teacher I ever had and I try to pattern after her all the time and have made her my model." "Her sympathy with my little weaknesses," said another, "and her never failing kindness and trust has made me what I am." Speaking of his favorite teacher a boy said, "He has affected my life more than any person in the world except my mother." A girl said, "She has had more to do with giving me my ideals than any one else."

Influence on Pupils' School Work. Again the sympathetic teacher makes the pupils' school work interesting and therefore less difficult. As the pupils express it:

"It was a pleasure to get our leasons for her;" "Her kind words and sympathy have made pleasant the schoolroom;" "When I go into her class I do not shiver and say: 'Oh, I wish this period was over;'" "She made her subject the looked-for-subject of the day;" "Her manner was so pleasing and encouraging that I longed for the hour to come when I should recite to her;" "Some of the pleasantest hours have been spent in recitation with her;" "I am always pleased when it is time to go to her class;" "It is through her that I have come to love school as I do;" "An hour in her class always seemed to pass in half that time," etc., etc. "She makes her classes so interesting," writes a girl, "that instead of watching the clock to see how many more minutes we have to stay we wish it would last twice as long as it does." "One teacher I have had for two years," said another girl, "has taught me more than any other teacher I have had throughout my high-school course. It has always been a joy for me to get her lessons, not wholly because I like the subject she teaches but because her lessons are so pleasant and interesting." The quotation is typical. The sympathetic teacher's subject is almost invariably the favorite one. "I remember one teacher," said a girl, "whose classes were always crowded because students would take that study five hours instead of choosing a three hours course, just to be with her and all because she was sympathetic and never scolded." Another girl said: "I studied Latin the last two years, more because Miss —— was such a delightful teacher than for the enjoyment of the study itself." Even a disagreeable subject with a good teacher becomes a favorite one. "There has been one study in the high school," said a girl, "that I once detested. I always dreaded the time for that recitation to come. But through the influence of one of my teachers I have learned to like it." "I have found," said another, "that even if I have despised the subject formerly that if I have a teacher I like, one who is sympathetic and takes an interest in the girls, that I grow to like the subject more and more until finally it becomes as pleasant as the rest." But quite as often does a favorite subject become disagreeable if the teacher is not liked. One girl writes: "the pupls' interest in a study and, therefore, success, depends as much upon the teacher as upon the pupils themselves. For instance, last year mathematics was a pleasure because our teacher was lively and interested. I continued the study this year but instead of being the pleasure it was, it is a "bore." The teacher is older and of an entirely different nature, and as a result those who liked mathematics last year are sorry they continued it."

All seem to think that the sympathetic teacher makes the students do more and better work. Typical sentences are:

"We were always prepared in the lessons recited to her." "I always study her lesson when I am too lazy to open another book." "Through her inspiration I have always done my very best work." "Her encouragement brought many pupils who were poor in other studies to the highest grades in her class." "The girls always make an attempt to prepare her lessons not with the idea that they must or that they will be marked down if they do not, but because it is a pleasure for them to do so," etc., etc. "It is hard to prepare lessons for some teachers," said a girl, "because pupils dread to go into their class. But it is a pleasure to prepare our lessons for her and I should feel badly indeed if I had to go into her class without having my les-

son prepared." "Every pupil in her class makes it a point to have that lesson and always feels as if he were wronging the teacher, the class and himself if he is unprepared."

A hundred or more quotations like the following might be given.

"The teachers we have," writes a girl, "have a great deal to do as to whether we will succeed or not. If they are sarcastic and do not encourage us, we are pretty sure to dislike their study, and if we hate a study it is much harder to learn. On the other hand if a teacher is sympathetic and encourages us we like their subject, take an interest in it and work hard to master it." "Speaking from experience," said a boy, "I think if a teacher is severe or unpleasant one will dislike his subject and put little energy into the study of it. On the other hand if a teacher is pleasant and sympathetic the pupil will most certainly study that subject with interest." "The class to which I belonged," writes a girl, "was one whose delight it was to annoy the teacher. We tried our usual tactics on her but after we had recited to her for about two weeks you could not find a single scholar but who would have done everything to help her. They never tried to annoy her in any way and never thought of such a thing as coming to class without knowing their lessons. This only shows what she could do with a class with which other teachers were in constant trouble."

The contrast between the sympathetic and the unsympathetic teacher is vividly shown. Concerning one of her unsympathetic teachers, a certain girl writes: "I always had a feeling of repulsion when I came in contact with him. I did not care whether I made a good impression on him or not, never cared how I behaved, did all sorts of things to annoy him and never cared whether I got my lesson or not. He always seemed to rub the fur the wrong way." Concerning a teacher of the opposite type the same girl said: "For her I always wanted to do my best. To do favors for her was a delight and to displease her gave pain. We all have our ideal teacher to whom we look and whom we try to imitate. She is mine and I try to grow more like her every day. I shall ever strive to be an honor to her." The sympathetic teacher makes school pleasant and interesting. The unsympathetic teacher, in the words of a boy, "makes one feel as if he did n't care whether he graduated or not." The sympathetic teacher makes students appreciate the good of the school. The unsympathetic teacher makes them hate it and develops in them an "I don't care attitude towards their books." The sympathetic teacher's subject is the "looked-for subject of the day." The unsympathetic teacher's subject is always disagreeable and the hour it comes "dreaded by all." "If I had not particularly liked school and the subject she taught," said a boy, "she would have killed every spark of interest I had." Another boy, after telling what a certain unsympathetic teacher did, says: "This is very discouraging to every student in the class and tends to check their efforts to do good work."

Again, for the sympathetic teacher students do their best work. If the teacher is disliked the work is slighted in every possible way. "He has caused such a lack of interest on my part," said a boy, "that I have no desire to master the subject except for the mere sake of finishing it." In fact so strong is this influence upon their work that the sympathetic teacher makes students like studies they once disliked while the unsympathetic teacher makes them hate a subject they formerly liked. "He is the instructor of a subject," said a boy, "which I formerly liked and took great interest in, but I must confess that I have now so nearly lost interest in it as not to take much trouble in preparing it." Again the favorite teacher can do more, it was said, than all else to interest pupils in school and keep them from dropping out. Unsympathetic teachers actually make them leave. After describing a certain teacher of this type a boy concludes with the words: "With such a teacher as this a student finds his situation absolutely unbearable and to escape the continual 'hum-drum' many students stop school."

If these statements give us the facts, as I believe they do, Emerson was right when he said: "It makes little difference what you study in school but it is in the highest degree important who your teacher is." As a boy very wisely put it: "Teachers have more influence upon their pupils than any one knows or than they realize themselves." We ought to know what sort of teachers exert the greatest influence for good. To try to determine this is certainly a worthy aim, if not the first necessary step, towards securing better teachers for our schools, the one reform we need to make.

V. Conclusions and Résumé.

The most striking result that the study reveals is the burning need which high-school students feel for encouragement, sympathetic direction and help. No teacher who failed to give this sort of help was a favorite, while of almost every teacher disliked it was said that he discouraged his pupils and could not or would not give the direction and encouragement required. In the study of "Why Pupils Drop Out of the High School," already referred to, it was found that loss of interest and discouragement were the two chief causes assigned by the pupils for their classmates leaving school. Taking this in connection with the present result it would seem that the most important function of the high-school teacher is to give his students the direction and encouragement they so much crave and need. According to the pupils' reports, sympathy, kindness, personal interest on the part of the teacher, favorable recognition, guidance, direction and daily encouragement are absolutely ne-

cessary for high-school students to thrive. Over and over again it was said of favorite teachers that they were not too thoughtless occasionally to praise good work or too busy to give a word of encouragement at just the right time. If this be true it is of the greatest importance to determine as nearly as possible what kind of teachers best succeed in giving this needed help.

To a solution of this problem there are at least three ways of approach. In the first place something may be learned from the opinions of eminent educators and from their descriptions of model teachers. But their opinions and descriptions at best are theoretical and incomplete. The model teachers so described are almost without exception combinations of the various characteristics of the individual writers who described them, supplemented here and there by certain traits observed in other successful teachers they knew, and rounded out by a few extra traits evolved from their own inner consciousness. They do not fit the case because the writers have omitted some of the necessary facts that should be taken into account. Again, something may be gained from careful observation and from pooling the experience of successful teachers. But here again we deal merely with inferences; for teachers and adults can only infer what characteristics especially appeal to pupils or what kind of a teacher best succeeds in helping them. At least one other way of getting a characterization of the most helpful teacher remains. We may ask the pupils themselves what sort of teachers have been most helpful to them. They know at first hand what teachers influenced them most for good, who encouraged them most, what teachers they liked et cetera, and can therefore give a better description of the model teacher than any one else. But without discussing the relative value of the facts obtainable in these different ways it should be said that all are important and that whatever we may think of the value of the pupils' opinions as compared with the observations and experiences of educators, it is not wise to ignore what they say, if we would get any complete and adequate notion of what the model teacher should be.

Eight hundred and twenty-nine high-school students have told us that their best and most helpful teachers were pleasant, cheerful, optimistic enthusiastic, young, etc., etc., etc. That they thoroughly understood boys and girls, *i. e.*, knew something about their aspirations and thoughts, understood the strange new feelings and doubts with which they were struggling and the new adjustments they were striving to make. They have said that they could explain, lead, guide, and direct their pupils in their work, that in all their dealings and intercourse with their students these most helpful teachers were always reasonable, considerate of a pupil's feelings, fair and just, patient and

kind, never nervous, irritable, over-particular, cranky, sarcastic, thoughtless or the like. They have said that they tried to understand a pupil's motives before they judged of his acts, that they never expected nor demanded unreasonable things but always kept in mind what pupils were able and should be expected to do, that they were thoroughly unselfish, always putting the interests and welfare of their pupils ahead of any inclinations or special interests of their own, that they always treated their pupils like young ladies and gentlemen, never like children or pupils in a grammar school, that they trusted them, believed in them, put them on their honor and acted as if they expected them to do right, that in class they gave direction ahead so pupils would know how to prepare the work assigned, that they guided and directed the activities of their pupils instead of demonstrating everything to them or merely hearing them recite what they had learned at home, that they always made their work interesting, enjoyable, and seem significant. They have told us that nothing was more fatal to a pupil's interest and progress in school than to be misunderstood. They have said that when a teacher ceases to be a learner and settles down to the didactic habits to which his profession so naturally leads him that he is old, and, if old, pedantic, over-particular, old-maidish, impatient, cranky, and worse than useless so far as doing them any good is concerned. They have told us that while scholarship is a necessary qualification of the helpful teacher, that this in itself will not suffice; that the truly helpful teacher must also know how to teach. These students say that high-school pupils are less apt to cheat, break a rule or misbehave in school when they are treated like young ladies and gentlemen, put on their honor, believed, trusted and the like, they have told us that if a teacher is habitually suspicious and acts as if he expected his pupils to cheat or do wrong that he is sure not to be disappointed, that in such a case they feel like they had nothing to lose so always do what is expected of them, but that if a teacher trusted them, put them on their honor, that they always felt as though they must do right. Every teacher should carefully consider all the pupils have said.

A mere glance at the characteristics which the students especially emphasized will show that it is the common homely virtues which appeal to high-school students most. At first thought it might be supposed that we knew all this before and that what the pupils have said exactly coincides with opinions already expressed by educators and teachers on this point. But even if this were true the vividness with which these characteristics were described, the renewed emphasis which they received would make the pupils' reports valuable in themselves. There are few if any teachers who cannot be lifted to

a higher plane of efficiency by seeing themselves through their pupils' eyes. Beside it has not been generally known that the simple virtues appealed so strongly to high-school students and that personal appearance, stylishness, neatness, conventionality, refinement, politeness, culture and the like, especially admired in the lower grades, count for so little. H. E. Kratz in his study of the characteristics of the "Best Teachers as Recognized by Children" (*Ped. Sem.* XIV, p. 414), based on reports from 2,411 children in the Sioux City grammar schools, found that 62 per cent. especially admired the teacher who was neat and attractive in appearance, while 7 per cent. mentioned the fact that their favorite teacher was polite. The present study clearly shows that other virtues appeal to older students. Much stress has been laid on these appearance qualifications by most school boards in selecting teachers for the high-school, but from the present study it appears that the thing which counts with high-school students is not so much the manners or appearance of the teacher as what he does, how he treats his pupils, his disposition and character, the qualifications he possesses—these are the important things. Even the matter of age and sex is not as important as some have thought. What the returns most clearly show is that a teacher may be a favorite with boys and girls and be truly helpful to them in spite of his appearance and regardless of age or sex, the vital thing being that he possess certain qualifications already described.

To be sure the majority of helpful teachers described were below thirty-five years of age. 85 students said in so many words that the best high-school teacher they ever had was young. Moreover most of the teachers disliked were said to be pedantic, cranky, "always right," or as one pupil put it "old and out of date." So it would seem that young teachers are more likely to possess the qualifications which pupils find helpful and admire than teachers well along in years. But it should be borne in mind that being old in the sense the pupils used the term is not so much a matter of years as the possession of certain characteristics which usually accompany old age, but which may be found in any teacher, that wholly unfit him for real helpfulness.

On the question whether in general male teachers are more helpful to high-school students than female teachers, nothing conclusive can be said. Many psychologists and educators have argued that they are better, at least, for the boys. This, in the light of the pupils' statements, would mean, if true, that male teachers were more likely to possess those qualities which pupils at the high-school stage find helpful or that they are more apt to possess the qualities and virtues which

more especially appeal to the boys. The boys described as many favorite women teachers as men, showing that half of the most helpful teachers they had in the high school were women. The girls described nearly three and a half times as many favorite women teachers as men, while both girls and boys described about twice as many unsympathetic female teachers as men. These figures would seem to indicate that male teachers were preferred by the boys and female teachers by the girls. But when we take into account the fact that some of the girls had never had a male teacher at all, that others had had but one in all their school course and that even the boys have, as a whole, had many more women teachers than men, we can base no conclusions on these facts. All we are warranted in saying is that according to the pupils the helpfulness of a teacher depends less upon his sex than upon the qualifications he possesses. To establish that a man is a better teacher for this stage than a woman it would have to be shown that women teachers as a rule possess fewer of these helpful qualifications than men, which from the data at hand cannot be shown.

However, a few things bearing directly on this point should be mentioned. For instance recent investigations in Germany and those of Dr. Burnham (*Ped. Sem.*, Vol. XI, pp. 488-499), in this country have shown that much ill health, nervousness, irritability and the like exist among all classes of teachers in the public schools; and everybody knows how the unhygienic conditions of the schoolroom, the worry and strenuous work, coupled with the intense mental and nervous strain tend to break down the teacher's health and to make him irritable. So far as I am aware it has not been shown that women are more easily affected in these ways than men, but it is generally believed that they are more affected by the wear and tear of the schoolroom and so sooner break down. Should this be true it would strongly argue in favor of male teachers for the high school; for, according to the pupils, nothing leads to more discouragement and to so many far-reaching evil results as for a teacher to be nervous, impatient, irritable or cross. Again it has been said that women are compelled to govern in a different manner from the men, that they are almost forced to resort to sarcasm, ridicule, etc., the use of which always leaves in the minds of the students an ineffaceable scar. This would also argue in favor of men teachers for the high school, if true, for nothing is more bitterly condemned by the students than the use of these weapons. On the other hand it has been said that women, as a class, are more optimistic and patient than men, which, if true, would do much to balance her short comings in these other respects. So the question whether in general, male teachers are better for high-school pupils, can from the present

data not be solved. The one contribution made by the pupils on this point is that a teacher's degree of helpfulness depends not upon his age or sex but upon his qualifications and character.

On the other question, whether a male teacher might not be better for the boys and a woman for the girls more can be said. A careful comparison of the characteristics especially admired by the boys and by the girls shows that some significant sex differences occur. Both require all the encouragement and help they can get but the indications are that they are not helped in the same way. The girls especially admire the teacher who is easy to approach, who is not reserved, who makes them feel at ease, who is sociable, a companion, a confidant, more like a true friend, who is inspiring, who possesses a strong character and an attractive personality, et cetera. The boys never mention these things. Both admire justice and demand it in the strongest terms but the girls are more sensitive to partiality than the boys and seem to be more affected by it. For them partiality is almost considered a crime, the very thought of a teacher being in the least degree partial forever branding him as an object of dislike. The boys lay little stress on this point. They only ask that their teacher be just, in their own words, that he "be always perfectly square with them." Again, the girls like the teacher who explains a great deal. The boys often said of their favorite teacher "He lets us think for ourselves." They require a different method in recitation from the girls. They like to argue and discuss, like variety and originality in the teacher and have no use whatever for a recitation which consists merely of questions by the teacher and committed answers by the pupil. The teacher "who requires his students to think just like himself," who "thinks he is always unquestionably right" is more disliked by the boys than by the girls. Again the girls crave merited praise; they like the teacher who "is not too thoughtless to occasionally encourage good work." Some even like public praise but the boys are not encouraged so. Both admire the teacher who trusts them, who has confidence in them, who believes what they say, who puts them on their honor and treats them like young ladies and gentlemen, but the papers show that the girls pay more attention to such things and are disconcerted more by the lack of such treatment than are the boys. Girls are likewise hypersensitive to sarcasm and ridicule. If we may judge from what they have said they never forget and seldom forgive the teacher guilty of resorting to their use.

The boys are not influenced so much by their likes and dislikes of teachers. They are more original and individualistic than the girls, more reserved, insist more upon good order, espe-

cially admiring teachers who surely but naturally and easily govern them. They strongly demand that they be understood, and literally despise the teacher who treats them like children, or as though they were pupils in a grammar school. Especially do they dislike teachers who are unjust, or who seem proud of the fact that they have authority over them, who rule them as though they had no rights whatever. In a word, it would seem that boys require a different treatment from the girls. The school work looks quite different to them. They are asking everyday about everything that comes up in school, "Is it worth while? Does it pay? Will it pay me?" Many get the idea that going to school is not worth while, that it does them little good, that it is a place for girls and the like. (*Ped. Sem.*, Vol. XI. p. 223.) There is no indication that the girls bother themselves about such things For some reason girls seem better satisfied to do the work from day to day just as the teacher requires it, seemingly well contented with present results and the daily routine of the school. The boys are inclined to be independent, to break away from the customary routine of the school, to make money and do what seems to them more worth while, to oppose anything conventional even before they are bored.

In the light of these sex differences the question would naturally arise, does not the high school of to-day tend to favor the girls? Is the encouragement and help given by the teachers as well adapted to helping the boys as the girls? Are male and female teachers equally helpful to boys and girls? An attempt was made to get definite data on the last point by tabulating all the qualities which the various favorite male and female teachers were said to possess, in order that these characteristics might be compared not only with each other but with the qualifications and virtues especially admired by the boys and those admired by the girls. But all the comparison showed was that the qualities constituting the highest degree of helpfulness for both boys and girls might be possessed by teachers of either sex, that the pupils made real helpfulness not a matter of sex but one of qualification and character, which only means, I take it, that this was no test of the problem. What positive evidence there was indicates that male teachers are, on the whole, better for the boys while female teachers are preferred by the girls.

The question of the value, meaning, and significance of the students' reports may be raised. What do the students' statements indicate and mean? Of what advantage is it to know what the pupils think? How may the teacher utilize what the pupils have said? Some may say that students are not good judges of a really helpful teacher, that their ideals change, that

they later on will find that many things they once disliked were, in reality, beneficial to them. Others might see in the great need for encouragement and help expressed by the pupils, in their longing for kind treatment and sympathy, their demands that all school work be made pleasant and interesting, unmistakable signs of degeneration: They would say that these things indicate that high-school students are becoming effeminate and weak, too easily discouraged, losing their curiosity and determination to succeed and relying all too much on outside interests and helps. But even granting that this be true, would anything be more important than to find out that such was the case? However, there is no real reason for believing that the pupils' statements indicate any such degeneration. Even the fact that boys especially admire teachers who are patient and kind and that they describe so many of the same qualities which the girls admire is no indication that they are becoming effeminate or less manly than formerly. From the character of the returns we must conclude that the longing for encouragement and help merely indicates the great need of it. The fact that so many of the same characteristics were emphasized by both boys and girls shows that these were deemed the basic qualities in the good teacher. When pupils reported that they especially liked teachers who made their work pleasant and interesting they clearly meant that they approved teachers who put enthusiasm and life into their work, who could explain all difficult points, who directed their pupils and really taught instead of hearing them recite, who had the rare faculty of setting their pupils to work and guiding them, who could relate their subjects not only to the experience of their students but to life—this was making things pleasant and interesting.

Again it might be said that the students' statements represent nothing more than a mere whim or caprice, or at best that they are a mere collection of opinions, for which society, the home, past teachers and the school are chiefly responsible, and that therefore, they can have little value for us. But even granting all this it is still important to find out what the pupils think. For if what they have said reflects a sort of student ethics, itself a product of the school, and shows or even indicates that the ideals so formed are bad and do not make for the development of the highest character in boys and girls we ought to know it and at once attempt the reform of schools responsible for such perverse ideals. If, however, the students' opinions represent a real basic need, if they have described the characteristics which really prove most helpful or most hurtful to them, if they are actually influenced in the ways they have indicated, as is probably true, how much more sig-

nificant and important do their reports become. Then we have in their descriptions the best characterization of the model teacher that it is possible to get. But whatever we may think their statements indicate or mean, whether these estimates of teachers be right or wrong, it is important to get their point of view. No one would maintain that their opinions give the whole truth. What they have said should not be taken in any absolute sense but merely be considered along with all other obtainable facts, such as the observations and experiences of successful teachers, the opinions of trained students of adolescence, prominent educators and the rest, and from a study of all the facts get our notion of what the model or helpful teacher for this promising period should be.

To state the main facts which the study brings out in a word we may say:

1. That pupils demand constant direction and encouragement throughout their high-school course, which only teachers with certain definite qualifications and qualities of character are able to give.

2. It is the common virtues and the more fundamental qualifications in teachers that appeal to high-school students most. Personal appearance, neatness, politeness, culture, etc., however important for students in the lower grades, are supplanted at the high-school stage by more fundamental things.

3. Of primary importance, from the pupils' point of view, is the teacher's ability to understand boys and girls. This it would seem depends largely upon the teacher's disposition and youth. It is the teacher who is young, who has retained the true spirit of the learner that is most likely to be cheerful, interested in his pupils and his work, and to possess the rare faculty of understanding boys and girls.

4. In the main the characteristics admired by the boys and the girls are the same but a few significant sex differences occur which indicate that boys require a somewhat different treatment from the girls.

5. Teachers of either sex, however, may possess the characteristics necessary to make them truly helpful to both boys and girls, their degree of helpfulness depending not upon their age and sex but upon the number of these helpful qualities possessed.

What the actual qualifications of these helpful teachers were, has been fully described. Pointing these out constitutes the chief value of the pupils' reports. If to know what sort of teachers students find helpful, will in any way aid high-school teachers in making themselves more serviceable to their students, this presentation of the pupils' point of view will not have been made in vain.

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THE PREDOMINANCE OF FEMALE TEACHERS.

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According to the last report of the United States Commissioner of Education, the report for 1903, male teachers numbered 26% of the total number of teachers employed in the public schools of the United States. In other words nearly three-fourths of our teachers are women. The percentage thus stated reveals very little of the actual situation. The more detailed statement, which follows, shows that there is a very unequal distribution of male teachers between the different States and that in many of them women are in almost exclusive control of the actual work of teaching. In Rhode Island 8.3%, in Mass. 8.9%, in New Hampshire 8.7%, in Conn. 9%, in New Jersey 12.4%, in New York 12.3%, in Minn. 14%, in Wisconsin 15.2%, in Michigan 16.8%, and in Illinois 24% of all the teachers in the public schools are men. On the other hand in many of the States the percentages range far above the average, as for example: in Missouri 32.2%, in Indiana 42.1%, in North Carolina 45.5%, in Kentucky 43.2% and in West Virginia 52.3% of the teachers are men.

There has been a steady decrease in the percentage of male teachers during the past twenty-five years. In 1880 42.8%, in 1890 34.5%, in 1900 29.9% and in 1903 26% of public school teachers in the United States were men. Although no general statistics can be cited there is some evidence that in some quarters the low water mark has been reached. In Massachusetts the percentage of male teachers increased between the years 1900 to 1903 from 8.8% to 8.9%, in Alabama from 30.1% to 49.2% and in Montana from 16.6 to 17%. Not only in general has there been a steady decrease in the percentage of male teachers but the actual number has decreased while the number of female teachers has doubled. In 1880 there were 122,795 male teachers and 163,000 female teachers in the United States. In 1902 there were 117,035 male and 332,252 female teachers.

According to the figures cited by the committee from the male teachers association of New York City, in the report on the necessity of men teachers in elementary schools, published in February, 1904, 93% of the teachers in the elementary schools of the large cities of this country are women and "the

few men that are in the elementary schools are largely in administrative work." The report states also "that over 90% of all the boys in the United States leave school without ever coming in contact with a single male teacher.

In the report to the National Educational Association by the committee on salaries, tenure, and pensions of public school teachers in the United States, which has just been issued, the following statements appear: "In high schools 3,417, or 39.7% of the principals and teachers are men. Of the principals alone 38.3% are men, while of the teachers alone 35.8% are men. "In marked contrast to the high schools are the elementary schools. Here only 3,878, or 5.1% of the principals and teachers are men. Of the principals alone 38.3% are men, while of the teachers alone 2.1% are men."

These statistics were compiled from reports received from 467 cities with a population of over 8,000.

The statistics cited above indicate that a relatively small part of the teachers in our public schools are men; that a large part of those employed are in administrative work and exert no direct influence on the individual pupil; that very few pupils come in direct contact with male teachers and that in many cities man's direct influence is practically nil.

The question at once arises, is this a healthy state of affairs, *i. e.*, should the education of both sexes be under the predominating influence of women? This is the question with which this paper has to deal and my purpose is to consider it only in its educational aspects and to trace out, as far as possible from the limited data available, the pedagogical effects of this overwhelming predominance of feminine influence.

Briefly stated some of the questions which necessarily enter into the study are as follows: Are there fundamental sex differences which enter into the work of the teacher and give to it its characteristic qualities, or are the teacher's qualifications not at all dependent on sex but merely a matter of personality, as many assert? This question strikes at the root of the whole subject, and unless we accept the first alternative we are at once non-suited and out of court. No one will, of course, deny that there are many qualities common to teachers of both sexes, such as gentleness, kindness, firmness, knowledge of subject and ability to impart it, and a high moral character, and that the successful teacher of either sex possesses most or all of them. This fact was clearly shown by Mr. W. F. Book's study on "The Sympathetic Teacher" and also by several hundred compositions from college and high school students on closely related subjects which I have collected. On the other hand no one will deny that there are marked characteristics which differentiate the sexes, so that, unless we are prepared to say that

the qualities possessed in common are the only ones that enter into the work of teaching, we are forced to admit that sex differences also play a part.

What part then do they play or in other words in what ways do men and women differ in their methods of teaching and in their influence over their pupils? It seems to me we must look for differences in (1) their attitude toward and influence over their pupils, (2) in their attitude toward affairs not directly connected with school work, (3) in their attitude toward school subjects, and fourth in the ideal for which the teacher stands in the minds of his pupils. Discipline, influence on character, method of teaching in its narrower sense including attention to details, emphasis on the broader aspects of school subjects, etc., must all be considered in this connection.

If we find that there is a considerable difference between the work of the male teacher and that of the female teacher, we have still to determine, in a rough way at least, the relative value of the work of each.

This in turn leads us to the practical question of the place men and women should occupy in our public schools. Should men be employed exclusively and only in administrative work or should they be assigned to grade positions also? If the latter, should they be assigned to all grades or to the higher grades only? On the other hand should women be restricted to the lower grades and to the education of girls? Or, to state the question as it now confronts us, is male influence an essential factor in education, and if so, where can it best be exerted?

Many other questions grow out of the above, but perhaps they are sufficient to indicate the general direction this study has taken.

The initial difficulty which one encounters in a study of this kind is the impossibility of applying statistical or experimental methods to any appreciable extent and the necessity of relying on opinion. These opinions are not without value, however, since they are the result of observation and experience. The few returns upon which this paper has been based have been collected with a good deal of difficulty from normal school students, normal school teachers, students in the educational department of this and of other universities, teachers and superintendents. They are are at least fairly representative.

What follows is an attempt to give in a concise form the answers contained in the questionnaire returns and to summarize the suggestions which they offer.

In the returns there is a general agreement that the effect of the predominance of female teachers differs in the different grades, the almost unanimous opinion being that most, if not all, of the teaching in the lower grades should be given over to

women, and that men have an important place in the upper grades and in the high school. Just where the male influence should come in is another question and one upon which there is much difference of opinion. Some would exclude men entirely from all below the grammar grades, others from the kindergarten and primary departments, while still others would employ men as grammar school principals and teachers in high schools only. In so far as there is any general agreement at all, it is, that women should predominate, at least, below the sixth or seventh grades.

The reasons given for the superiority of women as teachers in the lower grades reduce themselves to a very few fundamental ones founded on characteristic qualities of the female sex. Women are more patient, sympathetic and kind hearted; they have finer sensibilities and better understand the needs of young children; there is the instinct of motherhood in every well developed woman which enables her to take the mother's place in a sense and to obtain the good will and co-operation of young children. These are all held to be qualities that appeal to children of either sex below the age of puberty. On the other hand the qualities, which distinguish the male from the female sex, and which appear or become more pronounced at puberty, in boys at least, are peculiar to men. These are the manly qualities such as sternness, justice, self-reliance and originality. Great stress is laid on furnishing a manly ideal for boys and in placing them in charge of those who understand their natures and are capable of guiding them over the critical periods of their lives. This is the age of soul expansion, of self-realization and of the formation of ideals, just as the age below this is the time for drill for the purpose of acquiring, to use President Bryan's phrase, "the alphabets of knowledge." Discipline becomes a more and more important factor as the age and intelligence of pupils increase, and this is often given as a reason for the employment of men in the upper grades.

A few extracts from the returns will illustrate the points enumerated above.

One writer states:

"A woman teacher is a necessity in the lower grades. In the higher grades boys, at least, should not come wholly under the influence of women teachers."

M., 24. Women should greatly preponderate in the kindergarten and in primary grades, but in the higher classes men should be in the majority. Women have patience and tenderness, qualities which are necessary for a good kindergarten or primary teacher.

Another writes:

Women teacher are better below the seventh grade, since they have

"more patience, more sympathy and more understanding. But when the boys and girls are growing from youth into manhood or womanhood, they need the strength, the inspiration of a man to steady them and to give them new, different ideals outside of themselves."

W., 26. In the lower grades female teachers are probaby better, because they understand child nature better, are more tender, sympathetic and winning than men and "so appeal to the child more strongly and take the place of the mother in a way." In the intermediate grade it makes little difference, but perhaps men are better for boys. In grammar and high school grades, both, but especially men are needed, since many of the traits of character which should come out in adolescence are found more in men. "The predominance of women here is a bad thing, since few women can understand the adolescent boy."

M., 27. "It does differ for the different grades. The mother heart is a great factor in all educatiou, but more especially in the primary grades."

To the question does the effect of the predominance of female teachers differ for the different sexes, the majority answer in the affirmative; but a few answer in the negative. A closer analysis shows that there is little difference of opinion here. It is largely a matter of emphasis. Those replying in the negative seem, in general, to mean, that both sexes should come under the instruction of both male and female teachers, while those replying in the affirmative lay special stress on the effect on the boys.

The answers to this question are very clearly related to those given in reply to the question of the effect of the predominance of female teachers in the different grades. The consensus of opinion in general terms is, that children in the lower grades, regardless of sex, should be for the most part under the influence and in the care of women; that in the upper grades and in the high school children of either sex should be under the influence of both men and women; and that in the case of boys, at least, male influence should predominate.

A woman of twenty-three writes:

"It differs slightly with the different sexes, but not enough to speak of. I think that both sexes are affected in about the same way by the predominance of female teachers."

M., 33. "Both sexes suffer from it, but boys more than girls. Men understand the interest and problems of boy life better than women do and are better able to develop in boys the more virile elements of character."

W., 42. "In the higher grades, I think, all matters connected with discipline and hygiene for girls should be in the hands of women and for boys in the hands of men."

M., 32. "Both sexes are needed for both boys and girls but my experience has been that the influence of too many women teachers is decidedly bad for the boys."

In regard to order in the schoolroom three opinions are expressed: (1) that order depends entirely on the personality of the teacher regardless of sex; (2) that women preserve better

order than men do; and (3) that men have better order than women have. Most favor the latter view either as it is stated or with slight modifications. Men are accredited with general good order while women are said to give more attention to details of order which often defeats its own end. Some of the reasons given for man's superiority in the matter are: Men better understand boys who are usually the leaders in disorder; they have a more commanding appearance; have the physical force necessary to enforce obedience; allow more individual freedom; have better control of themselves; and secure more natural, more spontaneous obedience.

Those who hold the contrary opinion point out that men rule largely through fear, while women govern more by means of love, sympathy and tact. Personal appeal is also stated to be one of woman's most effective instruments. A few characteristic quotations will illustrate the two opposing views. First from those who believe that women secure better, more wholesome and natural order:

W., 25. "When the school is governed by any method but 'fear of punishment' women have better order in the schoolroom than men."

M., 37. Discipline of women is "no worse and usually better on account of their usually more rational discipline, *i. e.*, there is usually less of force in it."

W., 27. "As a rule men are more strict in the schoolroom, but it does not give as natural a feeling and there is always more fear among the children."

M., 27. "A man, I think, can keep better order in the schoolroom so far as keeping willful disorder in check but he is not so good as a woman where restlessness is due to fatigue and other individual factors."

From those holding the contrary opinion the following may be cited:

W., "As a rule men are stronger in schoolroom order. They are looked up to as more commanding. It is their natural calling."

W., 25. "Men better because they understand how to manage the boys. Girls are not apt to be leaders."

M., 28. Men have better discipline because they can enforce it if necessary and scholars stand in awe of them. "A man commands more respect and attention in the schoolroom because he is a man."

Another writes:

Women in general are not so good disciplinarians as men because (1) they do not understand boys and girls so well—particularly boys, (2) women in general are less commanding in appearance than men.

M., 36. "Women are better in the minutiæ of the schoolroom, worse in the tendency to suppress the individuality of pupil."

In regard to order in coming in and going out of the schoolroom, most of those answering the question say that women are superior. In just what this superiority consists is not very evident from the returns. One fact seems to stand out, how-

ever, and that is that women give more attention to details here as elsewhere, and that they secure more nearly perfect order so far as uniformity and military precision are concerned, This is admitted by most who make any statement other than that one or the other sex excels in this regard.

A woman of 24 writes:

"In going in and out women are very strict. They pay special attention to minor details, to looks, etc. They usually take great pride in the matter of their pupils attitude and outward conduct."

M., 21. "Women preserve better order in coming in and going out, because they are more particular about details and appearances than men are."

W., 24. Women are more apt to have better order in going in and out of a building because that is a point which generally does not appeal to a man as being particularly necessary.

M., 28. "Women pay more attention to the finer and more detailed matters than men do especially those which affect form or appearance."

Some, while admitting woman's more careful attention to details, hold that man's discipline here is more natural and depends less on the intermediate presence of the teacher.

M., 24. "Women excel by far." But they abuse this. "I remember a lady teacher who was so careful to watch me come up stairs, that I hated her."

W., 26. "Man probably better here, because children are ready to take advantage when it is possible, and this is more apt to be the case with women."

W., 25. "A woman can work out methods and schemes of obtaining good order in coming in and going out but the general directions of a man are more effective."

In regard to keeping order in the yard or on the playground the opinion is almost unanimous that male teachers are much superior. Rough play, rowdyism, swearing, and most of the other kinds of disorder can be traced to the boys. Men are better able to control them, because they can enter into their games, can understand and appreciate boy nature, and know better when to and when not to interfere with the play. No doubt man's ability to resort ultimately to physical force is an important factor here. Very few state more than that men have better discipline on the playground. Some, however, give reasons for their opinion a few of which may be cited.

W., 27. Man's discipline is better, because the boys usually give the trouble and a man can handle them better.

M., 28. "Men are better in the yard. In military life a woman is never a leader. The playground is as much in need of the commanding influence of a male teacher as the militia of the land."

W., 25. Men better—"due to their superior strength and vigor and enthusiasm for sports."

W., 23. Man excels because he allows greater freedom and interferes decidedly in cases where both he and the pupils recognize the necessity of it.

When we come to the question of the success of the sexes in obtaining obedience and to methods used and kinds of obedience secured by each it is difficult to rule out common and individual factors, and to determine just what, if any, differences exist. It is pretty generally admitted that men secure good order on the whole even by those who believe it is the result of unpedagogical methods.

It is held by some that the ought element enters into the discipline of women more than in that of men, but that the personal element is back of the idea of duty, *i. e.*, the pupil ought to obey for his teacher's sake or for his parents' sake. The female teacher is said to be more resourceful, more tactful, less given to command and more to appeal. Love and sympathy are the determining factors in obedience to the female teacher's authority.

On the other hand it is held that man rules through force of character, through confidence in his own ability to enforce obedience, through common sense requirements and reasonable demands.

Closely allied to the above is the nature or kind of obedience secured by teachers of each sex. Women are said to secure more willing and more personal obedience, *i. e.*, the pupil obeys his teacher because he likes her and shows his regard in this way. Obedience to the man's authority is prompt. Little effort is expended on the teacher's part. It is instinctive on the part of the pupil, a submission to leadership, to one who is instinctively felt to be in control. It is absolute and unquestioned and is generally obedience to just and reasonable demands. A few of the answers which suggested the above points follow:

W., 22. "Men obtain obedience by command or force; the best women teachers by making the school feel that they are hurting the teacher by disobedience—in short inspire obedience by love."

M., 33. Obedience "apt to be more formal with women and more reasoned with men. Women are apt to expect obedience because of their position; men because what they ask is reasonable and right."

W., 26. "Children obey a man because he is so strong, etc., and there is nothing else to do. They obey a woman because they wish to please her, because they love her, or—they don't obey."

W., 25. "Woman obtains more volitional obedience, she makes the child think he ought to obey. Man obtains instinctive obedience. He makes the child feel that he must obey."

M., 27. "Men are better in obtaining absolute, general obedience, women in obtaining willing obedience. With some temperaments a woman's appeal to personal factors is absolutely ineffective, there is need of firm demands, rather than of persuasion."

M., 24. "On the whole, I think a man is more apt to get a wholesome, honest, matter of fact discipline. Men are in a better position to obtain common sense kinds of obedience and to use common sense methods."

With very few exceptions all who answer the questionnaire think that male and female teachers differ decidedly in their personal relations to boys and girls. The few who dissent from this view maintain that there is no sex difference in this regard and that the personality of the teacher is the only factor involved. One writes: "The matter of sex does n't come in here." Another says, "It depends on the individual teacher," and another writes: "There is no difference here. Children have favorites in both sexes."

There is certainly much truth in the statement that much depends on personality, but it must not be forgotten that this personality itself is largely the product of those characteristic qualities which distinguish the sexes.

While it is recognized that there is a vast difference between the personal relations of teachers of the different sexes and their pupils this difference can be stated only in rather general terms. In the first place, as has been pointed out elsewhere in this article, the age and grade of the pupils are of primary importance in determining the teacher's influence and to some extent the sex of the pupils is an important factor. In so far as this point is considered in the returns the opinion is that women teachers are able to enter into closer and move effective personal relations to young children of either sex, and that in the upper grammar and high school grades the personal relations differ not only with the sex of the teacher but with that of the pupil.

W., 21. Women come into closer sympathy with children in the lower grades.

W., 23. "In the lower grades the lady teacher seems to understand both boys and girls." In upper grades this is not necessarily so.

W., 22. "In the lower grades women are apt to come closer to both boys and girls. In the high school or eighth grade she loses the boys while the man gains more friends among the girls."

W., 26. "The man is best able to enter into personal relations with pupils above the primary grades. The woman is able to enter into real vital relationship with primary pupils."

Many state that there is a tendency with teachers to favor the opposite sex. This is said to be more marked in the case of female teachers who favor the boys and are more exacting with the girls. Men favor the girls slightly, but are more fair to their own sex than women are to theirs. With women the favoritism is in regard to matters of conduct while with men it is more apt to be in regard to matters of study. In either case it seems to be founded on the attitude of each sex toward the other and toward itself, or in other words, this apparent favoritism is merely the recognition of fundamental sex differences by the teacher. The conduct of girls must differ in some de-

gree from that of boys and their emotional and physical condition must be regarded in the matter of school work.

There seems to be more of the personal element in the relationship between the female teacher and her pupils. She appeals to the heart, to the emotional side of child nature. Her influence is strongest with young children and girls. Men, on the other hand, make a more general appeal and are admired and respected rather than loved. Their influence is perhaps greatest with older pupils, especially with older boys who accept their male teacher as their ideal.

To illustrate from the returns:

W., 23. "The young lady teacher and the normal one usually show partiality to the boy. Gentlemen teachers are less inclined to be partial to either sex; but, I believe, they are in general more fair to their own sex than is a lady."

W., 25. "Women often pamper, flatter, create sympathy in boys—sometimes in girls. They nearly always flatter boys into being good, and just compel girls to be."

W., 21. "Men teachers are more apt to favor the girls, and women teachers the boys, for some unaccountable reason."

W., 27. "Women are more sympathetic and come closer to the emotional side of both boys and girls. Pupils usually admire men more, but until the boys have reached the adolescent period women have the strongest influence."

M., 27. "A man is more apt through his general personality, force of character to appeal to his pupils in a general way; a woman, on the other hand, gets into closer individual touch. I think there is much respect and admiration for, but less intense personal attachment to, male teachers. Pupils are more ready to confide little things to women teachers."

Very closely allied to the question of the difference between the personal relations of male and of female teachers toward their pupils is that of the feeling of pupils toward male and female teachers. To the small child of either sex, the teacher is the one from whom to expect sympathy and kindness and from the female teacher especially, since she better understands the child and has more sympathy for it.

At a later stage girls prefer men, and boys women teachers, but teachers seem to enter into closer relations with pupils of their own sex. The female teacher, in the nature of things, can enter into more intimate personal relations with the girls and furnish them an ideal, while the male teacher performs a like service for the boys, though the relationship is generally not so close.

W., 23. "Smaller children like a woman teacher best and are afraid of a man teacher, while older children generally like a man teacher best provided he takes an interest in their games and plays with them."

W., 20. "In lower grades both boys and girls confide in female teachers more readily than they would in a male teacher. It seems to me they are a little afraid of male teachers."

W., 26. "Young girls usually like a lady teacher better; young boys do not care so much. In the adolescent period pupils like a teacher of the opposite sex, though sometimes the boys prefer a man."

W., 23. Little children usually prefer a lady teacher, older girls usually like a gentleman best. Big boys prefer lady teachers but more boys prefer men teachers than girls prefer lady teachers.

In reply to the question which incite more zest to study, most say that in so far as there is any difference which is not individual men are superior. The reasons given for this are, that men have a broader outlook on life and are thus able to appeal to the interest of their pupils, that the personal element is not an important factor, that men are able to put forth more energy and to demand and to secure greater effort on the part of pupils.

A few representative quotations will suffice to illustrate these points.

M., 28. "A man incites to study for the sake of education. Pupils are inspired with unselfish motives to a greater extent by men than by women. Women can reach the girls and some of the boys. Men can inspire all boys and most of the girls."

W., 23. "A man incites students to study through inspiration, ambition etc., while a woman incites them to study by love, rewards, etc."

M., 32 "It is easier for men to cause pupils in the higher grades to become enthusiastic in their work. Men usually understand the world, business life, and the qualities necessary for success better than women do. To be a successful teacher one must have broad and comprehensive knowledge."

M., 27. "There is a difference of appeal. A man, I think, can inspire more easily love of science as science, the disinterested study of hard subjects. The very rigidity of his standards incites the pupils to greater study. A woman arouses enthusiasm by making the study attractive, by expecting much of you and teaching you to expect much of yourself, by appealing to personal factors."

M., 24. "The greater ability of men to lift things above the schoolroom plane makes their excitement to real and permanent zest in study greater. They can put more content into things."

In the returns there is a general agreement that if left to themselves male and female teachers would impart knowledge differently. Women give more attention to details, to drill, to technique and to form. Men emphasize essentials often to the neglect of details; they are more logical, systematic, and original, more apt to be independent of the immediate facts of the text, more given to generalizations.

W., 25. "A man is more versatile and hits the main points though he often neglects detail too much."

M., 26. "Female teachers in general seem to have less originality, cover the required ground in a more routine way and are more afraid of 'getting away from the lesson' and getting at the highest type of teaching."

M., 32. Men pay more attention to essentials while women give great care to details.

W., 24. "Female teachers will emphasize technique, details and form, while male teachers emphasize the spirit of the whole, the subject matter taken as a whole and relation of one thing to another. It

seems to me a female teacher is more inductive in method while a male teacher is deductive."

M., 24. "Male teachers are more original and interesting. Female teachers are not in such vital relation to practical life."

In regard to mechanism and routine in the schoolroom the opinion is almost unanimous that women are more prone than men to become mechanical and to do things in a routine way. None of the writers attempt to give reasons for this.

To the question which inspires more loyalty, devotion and ambition, a variety of answers were received. Some answer that men best inspire all three, others that men inspire loyalty and ambition while women inspire devotion, others that women arouse loyalty and devotion while men arouse ambition, and finally some would make an age classification saying that with younger children women and with older children men excel in all three. There is, however, more agreement than these answers, thus stated, seem to indicate. With a few exceptions all agree that women inspire greater devotion and that men arouse greater ambition. The term loyalty seems to have been taken in different senses by different writers, some making it synonymous with devotion and others with patriotism. The answers varied accordingly.

One man writes:

"Female teachers arouse more loyalty and devotion, male teachers more ambition."

W., 21. "Women inspire more devotion, less loyalty and ambition."

W., 23. "The lady teacher usually inspires more loyalty, devotion, and ambition among very young children, but a man inspires more among older scholars and those in the high school, for he usually makes their interest broader."

M., 26. "Female teachers in general if they inspire anything, inspire more loyalty and devotion than the men. The male teachers inspire more ambition."

To the question which takes more interest in the home, plays, and other relations of the children outside of school, all who give an unqualified answer reply that women do. Those who qualify their answers say that women take more interest in the home, but that men are more interested in plays and such activities as debating societies, clubs, etc. Women are better able to come into close personal relations with the home because they are more sympathetic, more readily gain access to the home, more easily win the confidence of mothers and better understand the problems of the home. Men, on the other hand, can better enter into outside activities, especially those of boys, but are not so well qualified to come into close relations with the home. In other words the outside activities are more in harmony with man's customary habits and thoughts and the home activities appeal more to woman's nature. Here

as elsewhere the age of the pupils is a factor which must be considered.

M., 28. "The female teacher takes more interest in the home, the male teacher in the play and sports of pupils.

M., 26. There is not much difference, female teachers being more interested in the homes and social interest of pupils, male teachers in play and organized effort like debating societies, etc.

W., 25. Women, because "they appreciate child life and have a closer sympathy with mothers than men teachers have." Men take more interest in the upper grades in play or athletics.

W., 20. "The female teacher certainly shows more interest in the home life of the child. She seems to understand him better, is more motherly in her ways."

M., 38. "For physical reasons the male can better show real interest in the games of the boys of the upper classes."

The next question asked was "In your own personal experience have you observed boys or girls that you thought should come under the influence of men for a while?" Almost all answered in the affirmative and gave cases on types of cases. All the cases or types cited fall roughly into two classes. 1st, what may be called one-sided children; 2nd, those in need of strong discipline. Under the first class are placed the only child, children who have been little under masculine influence, those in whom the more masculine virtues have been neglected, those lacking confidence in themselves, effeminate, over sentimental, self-important, babyish children and those whose emotional nature has been over developed.

In the second class (those in need of strong discipline) may be placed: children not easily governed by gentleness and kindness and who look upon kindness as weakness, self-willed, disobedient children, those who have always been governed by force at home, headstrong, wayward, bold and incorrigible children.

It may be well to observe that something more than the ability to enforce discipline must be the possession of the man who could exert the proper influence on such children.

Perhaps a third class should be added which would include children, especially boys, who are entirely misunderstood by their female teachers. The adolescent boy is the one most likely to suffer from this cause.

Here, as elsewhere in the returns, the greatest stress is laid on the necessity of boys coming under masculine influence in order that they may develop what are termed the masculine virtues. The two extremes: the effeminate, babyish boy and the bad boy, both are in the greatest need of the influence of a strong, manly man. Girls, too, may be greatly benefited by coming under the proper masculine influence, especially willful, flippant, flighty, silly, too self-conscious and over sentimental girls, and those

who are narrow, fussy, and too much given to petty details and little things.

A few quotations from the returns will show the general trend of opinion.

"Yes, I have boys now and have had them whom, I doubt, if we women can ever understand thoroughly. We have never been boys. On the other hand there are influences in girls' lives that no man can appreciate."

W., 21. "They (boys and girls) were too effeminate, inclined to be narrow, weak and one-sided in their opinions and quite set in them too. They needed a change of view point to broaden them."

W., 28. "The children were self willed, disobedient, lacking in ideals or were striving after those too low. They needed educating in self control, they needed a strong hand and a level head to guide them, a wholesome optimistic life as a model."

W., 23. "Those who have been under female instruction most of their lives and are growing one-sided and are in need of a change. Boys who have gone beyond femine control and who need a man who can control them."

M., 42. "Children just reaching the period of adolescence, especially those who have been little under the influence of men, should for a time, at least, be under the tuition of men in order that strong, wholesome, masculine individuality may be impressed."

W., 40. Girls who are fussy, finical in regard to details, and generally very narrow in their views, are sometimes greatly benefited by the influence of a vigorous, broad-minded man.

M., 27. "This is true of over sensitive children, or of children who have had their conduct shaped too much by affection and appeal to emotions. It is also true of such as incline to sentimentalism, one-sidedness of all sorts, subjectivism. They need something to counterbalance this—appeal to principle, a stiff course of discipline, system and control to cure flightiness, a more impersonal way of training which is to develop the sterner virtues of will and intellect and to subordinate the emotional side."

Summary.

The main points brought out by the answers to the questionnaire may be summarized briefly as follows: The effect of the predominance of female teachers differs in the different grades and for the different sexes. In the grades below the sixth feminine influence should predominate, but upper grammar and high school pupils should be under an equal amount, at least, of masculine influence. Young children of either sex should be in the care of women; after puberty male influence is necessary for the proper development of both boys and girls, but is especially necessary for boys.

Women pay more attention to details of order and preserve more nearly perfect order in coming into and going out of the schoolroom; men have better general order, secure it with little effort, and are obeyed instinctively by the pupils. More of the personal element enters into the government of women and appeal to the child's regard for his teacher is common.

The two sexes differ greatly in their personal relations to both boys and girls. Women come into closer relations to young pupils of either sex and with older girls; men come into closer relations to older boys.

Men incite more zest in study and secure greater effort on the part of pupils. This is largely due to the broader scope of the work under male influence.

Women are more prone to mechanism and drill and give much more attention to details. They inspire more personal devotion but less of ambition. They take a greater interest in the home affairs of their pupils, but less in their games, clubs, and societies than men do.

Many pupils of either sex should come under the influence of the opposite sex or under the influence of the sex opposite to that under whose control they have been. Boys who have been under exclusive feminine control are in greatest need of masculine influence.

To sum up the whole study the following general conclusions may be stated.

1. There are many common and individual factors which enter into the work of teaching and which are, in many cases, more important than distinctive sex characteristics.

2. Sex characteristics play an important rôle in school work, and both the sex of the teacher and that of the pupil are important factors in education.

3. The influence of the sexes differs with the age of the pupils. Young children are, as a rule, in need of almost exclusive feminine control, but older children should come under masculine influence in part at least. The mother instinct is a necessary factor in primary education.

4. It is on the side of character-forming that sex differences play the most important part. In the mere matter of instruction the difference between the sexes is not so marked.

5. Masculine influence is necessary for the proper development of boys.

6. The preponderating influence of women, as it exists at the present time, is detrimental to the best interests of our schools.

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EDUCATIONAL OUTLOOK BASED ON OCCUPATIONS.

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Thinking that a study of the occupations of the various elements of our population as given out through the last census report would be of some interest from the standpoint of educational theory, I have ventured to present a few of the statistics and to point out some conclusions. I am well aware that neither the occupations of the child nor those of the adult furnish ultimate criteria for a course of study, yet the industrial situation is no small factor determining such a course. Education and training aim to prepare the child to meet the present situation to the best advantage of both. More definitely they should aim to prepare him to work to better advantage—implying the preparation for different kinds of work and for new methods of work. Industrial education should enable the student both to meet and create new conditions. In any course of study while the industrial situation is only one of the elements to be considered its importance is so great that it cannot be overlooked. The ideal education cannot omit the means of living. The data on which this paper is based have been collected from all parts of the United States. The returns have been classified for the country at large and for the separate states. Conditions vary widely in different parts of the country, so much so that local industrial conditions must often determine what is best for the schools in any particular locality, that is to what extent the course of study in the schools of any particular locality should be influenced by this element. There are among the educational and training factors of our school system those (a) relating to physical development; looking toward the development of the body and later toward training for some particular work or occupation. (b) Certain fundamental studies intended to develop the mind of the child and give the elements of an education and later those studies relating to some particular work or occupation. (c) More general studies more or less remote from the business of the individual and termed culture studies. This classification, however, is arbitrary, education admits of no such division; for conduct implies a unified system of knowledge. The studies that compose the second group will represent the most variable factor for different localities.

The census bureau in 1900 recognized 303 gainful occupations. The term gainful occupation means productive labor of any kind, for example, the student in school may be supporting himself, or, the child 10 years of age or more may be "earning money regularly by labor, contributing to the family support or appreciably assisting in mechanical or agricultural industry;" but the doing of domestic errands or family chores out of school would not be included. The married woman may have a gainful occupation whether she does the work at home or goes regularly to a place of employment provided she is earning money for family support.

The total number of males above 10 years of age (1900) was 29,703,449. Of this number 23,753,836, or 80 per cent., were occupied as follows:

	Number.	Per Cent. of total number of Males.	Per Cent. of Males Employed.
Agricultural Pursuits,	9,404,429	31.7	39.6
Professional Service,	827,941	2.8	3.5
Domestic and Personal Service,	2,485,208	11.7	14.7
Trade and Transportation,	4,263,617	14.4	19.7
Manufacture and Mechanical Pursuits,	5,772,641	29.4	24.3

The important factors to be considered in a study of these occupations are (a) the wide diversity of employments, (b) the degree of specialization. In classifying the data the census bureau has listed 18 specified occupations under agricultural pursuits; under professional service, 28 specified occupations; under domestic and personal service, 29 specified occupations; under trade and transportation, 67 and under manufacture and mechanical pursuits 161 specified occupations.

The total number of females above 10 years (1900) was 28,295,796. Of these 5,319,397, or 18 per cent., were engaged in gainful occupations as follows:

	Number.	Per Cent. of total number of females.	Per Cent. of those at work.	Per Cent. of the men doing similar work.
Agricultural Pursuits,	977,336	3.4	18.4	10.4
Professional Service,	430,697	1.5	8.1	52.
Domestic and Personal Service,	2,095,449	7.4	39.4	50.1
Trade and Transportation,	503,347	1.8	9.4	11.8
Manufacture and Mechanical Pursuits,	1,312,663	4.6	24.7	22.7

From the census tables showing the actual numbers employed we find that of the males and females engaged in 303 occupations, the number of the latter exceed the former in but 25 specified occupations, the greatest excess being in the following: Servants and waiters; dressmakers, launderers and laun-

dresses, teachers, professors in colleges, etc.; housekeepers and stewards, seamstresses, nurses and midwives; stenographers and typewriters; milliners, boarding and lodging housekeepers. These ten occupations embrace 55 per cent. of all the females employed. If two of these be omitted, viz., teaching and stenography, the remaining are occupations peculiar to the home. By comparing the numbers in the above tables, it will be noted that the number of females approaches the number of males most nearly in domestic and personal service and professional service. Another important point is that 39.4 per cent., or nearly two-fifths of the females, are engaged in domestic and personal service. This means that of all the females who earn wages two-fifths of them seek employments relating to the home. As to other pursuits, nearly one-fourth of the females are engaged in manufacture and mechanical pursuits. These pursuits, however, require little technical knowledge or training, so little in fact that few of the laborers would be classified as skilled. Many of them represent a class whose business it is to feed a machine or to care for its immediate products.

Under the head of manufacture and mechanical pursuits, in which 4.6 per cent. of the females and 19.4 per cent. of the males are employed, 161 specified occupations are grouped. This category represents a wide diversity of occupations, and the significant point is the fact that a large per cent. of males engage in this kind of work. Under the 18 specified agricultural occupations, 3.4 per cent. of the females and 31.7 per cent. of the males are employed. Under domestic and personal service, in which 7.4 per cent. of the females and 11.7 per cent. of the males are employed, are 29 specified occupations. Under professional service 1.5 per cent. of the females and 2.8 per cent. of the males with 28 specified occupations, and under trade and transportation, 1.8 per cent. of the females and 14.4 per cent. of the males with 67 specified occupations.

Since the number of females is smaller in each instance and especially so in those pursuits that relate to trade and manufacture, the educational privileges for meeting the requirements of these occupations should favor the males. Another factor not to be overlooked is that more than one-half of the females employed are engaged in work peculiar to the home, and since only 18 per cent. of the females are employed we may say that 9 per cent. of female labor is in no way related to the household, and that 91 per cent. of the females, whether laboring or not, need an education fitting them for the home. The occupations of males indicate that young men require schools in which are many avenues for specialization. Those of the greater part of the females indicate the need of a general education fitting them for the home. On the other hand

a general education for the females, including the subjects of domestic science, manual training, nature study, and stenography, would meet the requirements of the industrial situation, with the exception of professional service.

The school is not adequately adjusted to the industrial situation. This conclusion is somewhat further strengthened if we note the number of children of each sex engaged in gainful occupations.

	Age.	Number.	Per Cent.	Age.	Number.	Per Cent.
Total number Females,	10–15	4,760,825		16–24	6,752,442	
Total number Males,	10–15	4,852,427		16–24	6,605,645	
Females employed,	10–12	485,767	10.2	16–24	2,136,445	31.6
Males employed,	10–15	1,264,411	26.1	16–24	5,544,631	83.9

The work of the children from 10-15 was distributed as follows: In agricultural pursuits, 4.3 per cent. of the females and 17.6 per cent. of the males. In domestic and personal service, 2.9 per cent. of the females and 2.8 per cent. of the males. In manufacture and trade, 2.9 per cent. of the females and 5.6 per cent. of the males.

The extent and variety of the occupations of male children is greater than that of the females. As a rule, however, children are capable of only the simplest kinds of labor. Preparation or ability to perform the more complex forms comes later as specialization becomes more pronounced. The work in which they engage cannot be taken as significant of the work they will ultimately choose for gaining a livelihood. The child is often compelled to labor whether it is along the line of his inclinations or not. At the same time he may be looking forward to a larger sphere of activity. Compulsion and poverty are usually the impelling forces to labor at this early age. The kind of work is too frequently the result of circumstances and cannot be taken as significant. Rarely do they look upon it seriously as their life work.

From the ages of 16 to 24, thirty-one per cent. of the females and eighty-four per cent. of the males were engaged in gainful occupations. As to the males in particular, at the age of 15 more than one-fourth of the number are at work, from 16 to 20, more than three-fourths, and from 21 to 24, more than nine-tenths. This suggests a well known fact that up to a certain limit the number of the male population engaged in gainful labor, beginning with childhood, constantly increases. Many join in these ranks with little education or preparation for service. The best remedy for this evil, judging from labor statistics, seems to be separate secondary schools for the sexes, —at least a school for the males that admits of early specialization along several lines. These lines may be roughly indicated

by the grouping of occupations, viz., agriculture, professional service, trade and transportation, manufacture and mechanical arts, domestic and personal service.

Another point has reference to the number of female workers classified according to nativity. Of the native white females having native parents 13 per cent. were employed; of those having foreign parentage 21.7 per cent. were employed. Of the foreign white 19.1 per cent. were employed and of the negroes 40.7 per cent. It will be noticed that a larger per cent. of both the foreign born and those native born having foreign parentage are employed than of the native white population. We cannot take this to mean that they have advantage through superior training or education. More frequently they are compelled from lack of training and education and from financial circumstances to do many kinds of labor that the native born could do equally well and perhaps better, work which the latter class consider beneath their station in life. Negro women are not educated to excel in any particular line of work. Their menial disposition on the one hand and financial circumstances on the other lead them to some form of labor. The two classes into which most of the labor of the Negro woman falls are agriculture (40 per cent.) and domestic and personal service (52 per cent.). Both the quantity of the product and the quality of the work would be greatly improved if this class could have a general education including nature study or elementary agriculture and domestic science.

This article has dealt only with the industrial aspect as it may be related to future education. Other aspects have purposely been omitted.

THE PEDAGOGY OF HISTORY.[1]

By G. Stanley Hall.

If we interpret history as including all that has happened in time from the beginning down to the present moment it is, of course, the largest of all topics and includes most others. In the yet broader horizon of evolution it embraces nature as well as man, and voluminous as are its documents, is most of it yet to be written. For our far narrower purpose, it is the experience of the human race stored in books and memory. In ancient Judea, Greece and Rome, it was the simple genetic story of one race and that only in certain very limited aspects. Now history is not one, but many, for besides modern nations the story of ancient ones is unearthed and enlarged so that the field of written history now stretches far beyond the ken of the most learned individual, while modern critical methods show that Herodotus and Thucydides, Tactitus, and Livy, precious as they are, yet knew little and understood less of the true history of their land and times. To-day every department of human interest has its history, books and authorities, great and small; each language or literature, philosophy, religion, science and industry, and there is military, financial, commercial, political history, histories of dynasties, heroes of the common daily life of the people, education, dress, fashion, parties, and every social institution, each with sub-divisions in which a man may work a lifetime and know a little of the rest. The school of Freeman, Stubbs, and Gardner, have little respect for Hume, Gibbon, Macaulay, Hallam, Lecky, Buckle, and the disciples of the former were scandalized at Froude's appointment to Freeman's chair because he tried to be interesting even at the expense of accuracy. They demand that each should choose a limited field of English history, keep to it and off the domain of others, cling to facts, and be very wary of all generalization and explanation, till we wonder if Schopenhauer was right in urging that history really has no meaning, and whether, as Schleicher said of language, history can be defined only by the phrase "Es ist was es wird."

[1] Address at the Annual Meeting of The New England History Teachers' Association, May, 1905.

At many points in this paper I have been indebted to data collected by Horace L. Brittain, a graduate student at Clark University.

In this confoundingly vast and complex field, what can the pedagogue now do? Shall he go on teaching the old matter by old methods served in new attractive manuals, as the Sunday School goes on teaching the Testaments, for edification only, ignoring the new bible revealed by higher criticism? If this were best we could not do it because in history the college expert and his higher view dominates and prescribes, while in religion conversely the church view dominates the professor and teaches him reticence and reserve. Hence it comes that in the one field, the high school youth is protected from methods and results of advanced scholarship while in the other they are often prematurely forced upon him.

To my thinking it seems now time to go back and move the previous and all dominant question why we teach history at all; what should it do for the young; why should it have a large and growing place in our ever more crowded curriculum? What is its value, and what can and should it do for the young?

I. Should it, as one group say, primarily teach by scientific methods, show the working of the law of cause and effect in human affairs, develop where possible on the basis of physical geography, introduce statistics to show average uniformities, or responses to physical conditions, even in the domain of individual freedom? This has been advocated even for upper grammar grades, but I believe the very nature of high school youth needs to develop from history a growing consciousness of freedom, to the sense of which, according to Hegel, is the only measure of advance. The very idea of law in human affairs comes late, and while we should ignore no standpoint this should surely be subordinate until the university period.

II. Is it, again, to teach to think historically, to acquire the habit of seeing all things in temporal perspective, as products of growth and development, to learn where to find authorities and sources, and to implant the habit of turning to these as Kendall's book and your committee of 1902 recommend? This is somewhat connected with the method of intensive study in a restricted field introduced into some English schools and occasionally here. This is surely a precious addition to the teacher's repertory and should not be excluded; but is it not prematurely academic? It is surely not our prime purpose to make historical investigators, and the complexities of Droysen's Historique would be precocity in the high school.

III. Again, assuming that good citizenship and patriotism are the religion of the public school, should it not be our prime object to make intelligent citizen voters, and lay the first stress upon duties to the State and society? This view is greatly emphasized by the modern interest in sociology and the need of amelioration and reform, and seems to me a yet higher aim,

immensely re-enforced by the needs of modern, political, social life. It is vastly broader than the effete watchword of the Blunchli school that was painted on the walls of the historical department of my late colleague, H. P. Adams, "History is past politics and politics is past history." But here, as in weighing each of the other standpoints, we must not forget the ever growing preponderance of girls in our high schools whose practical demands and interests all admit are not quite identical with those of boys. Girls do not like history as well as boys. Even the latter in the teens have not quite reached the age and maturity when civic interests, which are of slow growth, are very deep or strong.

IV. Again, is it culture history or to give a background and skeleton for literature, science, or to develop memory, language and imagination, to enlarge the naturally very narrow personal horizon of the young, to make them citizens of all times, spectators of all events, to assimilate the history of the race, to be the telescope and the microscope of man's self-knowledge, make the young feel the rich ancestral heritage of the past and worship their ancestors and their great deeds? This is perhaps the most broadly humanistic and liberal aim of all, but also perhaps the hardest, most comprehensive and least satisfactory, and culture history is yet in its infancy.

These, as ideals, are all not only helpful but noble. While they have much in common they are also diverse. Thus I believe that there must be one dominant aim to which all the others, while not liminated, should be subordinated, and I have accepted your invitation not, of course, as in any sense or degree an expert in history, but to plead that the high school teacher, while not ignoring these academic ideals or college prescriptions or even the very helpful report of the Committee of Seven, turn in thought to-night from these to another aim and take his cue from the nature and needs of youth, the highest criterion of all educational value, striving first to be a teacher and minister to these and abandon for himself the methods of original research. If you do this I am persuaded that a fifth aim, namely the moral one, will be found fittest to be made supreme. This conclusion is not based chiefly on the fact that in every land the percentage of juvenile crime is both increasing and becoming more precocious, significant as this indication is of the general need, but on the fact that ethical purposes by their very nature can best include and harmonize while they also overtop all others. Modern text books and theories of morals even do not suggest the richness, scope or efficiency of this point of view, to plead for which is my errand here to-night.

It was just because history was not thought able to moralize, but to be, as Gibbon later defined it, a record of crime, folly

and calamity, and to be often immoral, that it found almost no place in the trivium quadrivium which held sway for a thousand years, that the pedagogues of the Renaissance, the humanists including Erasmus and Melanchthon, and the philanthropines, either excluded it except for the education of princes, or confined it to carefully edited compends of antiquity or sometimes limited it to Judea alone. But for Luther, as for Salzmann, it was a thesaurus of inspiring ethical examples to show how all got their deserts in the end. For Schmidt it was to illustrate God's ways in the world. For Thomas Arnold it demonstrated the power working for righteousness, and was to give a practical philosophy of life. Even for Droysen its values are chiefly ethical or, as he puts it, it is the self-consciousness, the ethical "know thyself" of humanity, inculcating patience, uprooting prejudice, showing how virtue must be militant before it can be triumphant. It warns by showing the blindness, temptation and folly of men and inspires them by contagion to the emulation of the greatest deeds of the greatest and best men of the past.

Now moral education does not consist in teaching to avoid all swear or dirty words, disobedience, pilfering, truancy from school or church, rowdyism, cigarettes, quarrels, laziness, inattention, obstinacy, selfishness or disorder. These are not central. Juvenile immorality is not all comprised even in the nine hundred and fourteen German words for faults which Koezle lists from the writings of thirty pedagogues, nor in the fifteen large classes of faults to which he reduces them in his contribution to the growing science of paidological pathology, or to those errors to which the three thousand terms in the scolding vocabulary of old Haubererle refer. Many faults that interfere with the teacher's mere convenience or even ideals are only virtues unblossomed and yet in their homely bud. There is something the matter with the high school boy or girl that the teacher truly calls a perfect gentleman or lady. The very good youth is usually abnormal. A child may conform to these standards and be morally neutral, imbecile or even rotten. Truthfulness, *e. g.*, may be so inculcated as to kill the imagination, obstinacy so treated as to destroy the will, and so on through the list. Some, if not all, such faults are in some degree inevitable in the teens, and to magnify the guilt of them is to divert the moral sense from the larger essentials of virtue. Thus in pleading that history should be taught chiefly for moral ends it would be only priggish if we meant that it should be chiefly so used as to correct such faults. Whoever rubs in the fact that Washington could not tell a lie, or rubs out the fact that he swore, has neither historical nor moral common sense, or tact. Perhaps women teachers are more liable to

such errors of perspective and more prone to identify virtue with conventional conduct than men.

The real case is this. The one fact that towers above all others in the teens is that nature then suddenly endows youth with about all of her most precious gifts and gives us our psychic capital of heredity for life. This donation comes like a spring freshet that, if its floods are stored, irrigates every crop the soul can bear and brings all to harvest, but, if not, speedily passes away leaving only gullies, cañons, and desert wastes behind, so that later life is arid, desiccated and not fertilized. What is this bequest? It is hard to characterize. We may call it imagination which supplements facts, which represents the best of all history, namely, that which is not yet written because it has not yet occurred. Perhaps feeling or sentiment is a better term, or idealization which is often truer to the heart than to outer fact. The religionist calls it faith, the substance of things hoped for and the evidence of things not seen, which is the special forte of youth, or the enthusiasm of humanity which who can define? The moralist says it is a pure sense of oughtness or of duty not yet formulated, or given its clear objective aims, or again, it may be the sentiment of honor, the strongest of all motives, even overtopping the sanction, love of life itself, in young men and women, but often also the most perverted. It has been called the unminted bullion of humanism. At any rate, it is the nisus or push upward of evolution in the soul which has impelled man's every upward step in his development, the promise and potency of the superman that is to be. The psychologist can no more define it than the biologist can define protoplasm, or the physicist, ether. But it is the raw material of human life out of which everything that is best in it is made. It is plastic to the teacher to preform and mould. It is for the shaping of this moral life stuff that the historical even more perhaps than any other, unless it be the religious teacher, is responsible. It is the moral nature before it is developed into character or is expressed in conduct or habit. Genetically, it is a felted mass of all the dim ancestral experience of the race reverberating in the individual soul. It is love before it has found an object, interest before it is vented in the cultures. If this is wasted we are old at twenty-five, and if conserved we are young at eighty. Myth, poetry, legend is its placenta, and truth to it is higher than conformity to facts which, unvitalized by it, are dross, slag, the mere tailings of a mine. It often gives a brief scintillating moment of genius even to dullards. Better in youth, the gushiest, mushiest morass of sentimentality than the early aridity toward which our old civilization, our precocious devotion to utility, our inclination to the early loss of even the sense of, and sympathy with,

youth unprecedented in all history, which tends to make our school system, while the biggest, most costly, and materially magnificent ever seen, the least morally effective of any on earth.

Now what kind of historical teaching best develops this nondescript mother lye of the higher moral life? The age for the romance of history has not yet passed, but is at its prime in the middle teens. Herbart said twelve was the age when the subject matter of Homer sank deepest and did most good, but later studies indicate that this is a little early. At any rate, the taste for pure old legends like those of St. George, Arthur, the Round Table and the Grail, if well told in good Anglo-Saxon, according to Freeman's ideal, has not weakened at sixteen, and even if they are known before, now have new meanings. Youth is most at home near the dawn of things. Properly edited historic matter from the Old Testament, Herodotus, Thucydides, Tacitus, Froissart, and a long list of others, are psychologically nearer to this age than is the last election. Wherever the world is young youth is at home, and some of the oldest writers of history, properly edited, contain more for them than do the latest and most scientific. Dante, "the voice of ten silent centuries," needs only pedagogic editing to be one of the noblest links between literature and history. Now it is because the matter of the best of these old histories was long in the unwritten stage of oral tradition, plastic to the historic muse, that it has been worked over and distilled into an almost purely moral content. Much that the modern historian rejects because it happened nowhere is precious because it might have happened anywhere. Such history is the very essence of education at a certain stage and best of all calculated to bring out all innatenesses above described to embody them in incident and give their mazy indefiniteness form and shape. The faint inherited traces of ancestral experience find here their complement in the life of the race. Some tell us that the best of this most precious culture material is lost, but if so we must treasure all the more what is left if the practical science of evolving man is not itself to be lost, and we have a grave responsibility to improve and enrich our curricula by new inventories and constructions of this most condensed culture matter. For school purposes, as for Carlyle, history should be to teach the infinite difference between good and bad, to set forth, even if in loud colors, the law of right and wrong, justice and injustice. Just at that point when the cause of æsthetics and ethics are not yet quite differentiated, youth enjoys nothing like an unpointed moral, a cycle of events grouped about a great ethical problem. With this stimulus his memory, judgment and reason work best.

The very gallery of the theatre applauds most the apparitions of moral law where the hero and the villain richly get their deserts. Anything that shows righteousness rewarded and vice punished arouses interest as does nothing else. The Bible has been thought supreme and even divine and taught where no other history was, because it made for virtue and conduct which is three-fourths of life. Let scholars investigate and colligate the facts; the great teacher has the yet higher task of Biblifying them in this sense so that we can guide life by them, economize its forces, and get most out of it. Our problem is not, I ween, primarily to teach what has been, but to save moral powers from going to waste. In a crude metaphor we must first store the waters of life if we would later use them for power or draw them off into a thousand channels for fertilizing life. The dwellers in man-soul have learned to warm their moral life by wood fires from forests, both new and primeval, but the old traditions and uncouth myths which the modern historian rejects as common earth we are just learning to use like the coal measures laid down when vegetation was far richer and ranker than now and which are full of possibilities of power and warmth that we have not realized. These are already coming to be centres of great genetic interest to the psychologist and will have no less value to the teacher of history when we know all their meaning and how best to use them.

May I propose for your consideration a new definition of man as the only creature with an irresistible impulse to destroy his own pedigree? Primitive man contended long with the higher mammals for the dominion of this globe and won. He has always been the great exterminator. Every decade some species he hunts for sport or profit becomes extinct, and the list is a long one. Every century adds to the list of primitive people like the Boethuks and Tasmanians that perish from the weapons or disease of civilization and whose blood cries from the earth. Other ethnic stocks are likely to perish to the last man during the new century. The so-called missing link between man and the higher anthropoids has been destroyed by this ruthless instinct. Man covered his tracks and destroyed the ladder by which he arose. So in the world of culture we are fast losing all feeling for the naïve, the natural in thought, feeling and conduct, for the rural in our urbanized life, for childhood and youth which evicted from its paradise now cannot wait to become adult. Science is often practical, un- and anti-humanistic, our chairs of literature teach philology, our historians are pragmatic, disparage early writers as inaccurate, eliminate as useless the records of beginnings and golden dawns in the story of ancient nations because of an admixture of myth

which they have not yet learned to interpret. But Tyler, Frazer, Grimm, Wellhausen, and even Wagner, are historians, too, who have made this dim past glow with a new light, restorers of a lost stage of development and therefore also restorers of youth to its own, supplying the phylogenetic key to what was well nigh lost in the individual. Was it not a reproach to Grote, who swept away everything in Greece before the Doric invention, that it was left to the spade to find a new interpretation of Greek history in the earlier Mycenæan, Cretean and even Ægean period, that extends the story of Hellenic man from 700 back to perhaps 2000 B. C.? In short, wherever we look we now find indications that when psychogenesis and pedagogy come to their rightful kingdom the stones which the historians reject may yet become chief stones of the corner and that the maxim, "History for history's sake," like that of "Art for art's sake," while both have their place for adults, should be subordinate both in history and art, as should perhaps everything else for youth, to morals. Granted that history should give a growing self-knowledge in the present living progressive age, can we truly fit for this except by living through all the important stages of the past and repeating each significant step by which the present was reached? Does not youth suffer because history is still unhistoric and too exclusively devoted to advanced scientific methods? Indeed, is fitting for life in any present the best way of fitting for life in the ever larger future, and if educational ideals ever attain their proper place, will not the most advanced university graduate feel that in teaching history in secondary schools he faces as new and as important a field of original research as anywhere?

Finally, while pleading to-night merely for a new and greater emphasis here, other aims, methods and fields should, of course, not be ignored. For the teacher in no other department perhaps is it quite so necessary or quite so hard to use every method and yet keep each subordinate, to maintain just perspective and escape everything doctrinaire and faddish. While pleading for more and better oral narrative teaching we should surely always have a good text-book to anchor to, and here I am told and inclined to think from cursory inspection that our English co-workers are now better off than we, rapid as has been our improvement of late. The individualistic theory of history as the essence of countless biographies cannot interfere with any scientific or even necessitarian view in a mind with room in it. Some use of sources is now possible in the high school and gives a new sense for origins and documents. Note taking with some dictation, if careful and judicious, is a grateful variant for the pupil and gives the teacher by simple inspection perhaps the best of all tests for promotion. The li-

brary, collateral reading, with co-operative methods and efforts, learning to work together and work for the common good, suggests also a much larger collection of books and a comparative use of them in every school, and this may mark a new epoch in the habits of study. Too many maps, even large ones from the government, too incessant reference to geography, and especially too many pictures, lantern slides, perhaps games with history cards, it seems to me, some authorities to the contrary notwithstanding, we can hardly have. Colored chronological charts of both universal history and that of special countries, genealogical schemes of dynasties and reigning families, statistical diagrams from the census, curves of financial, industrial, vital data, the cycle or spiral method with a general survey later repeated and amplified always assuming that every review should be broader instead of a new period each grade, seem to me too little favored by the Committee of Seven, and is not both the unit block and the intensive method involving any high degree of accuracy and detail too academic, and should the high school teacher have to think much of satisfying college entrance examinations? Is that teacher not a poor devil, in the printer's sense at least, who brings into much prominence the collecting of and class work upon old entrance examination papers, stimulating in certain very limited ways as this may perhaps be to a few under present unfortunate conditions? So, too, mock town meetings and congresses may have a place, but is not the American way of evoking opinion and discussing questions, about which the wisest differ, overdone? May it not breed conceit and a sense of attainment, and are not the Germans right in their insistence upon inculcation, leaving reason and independent judgment and weighing evidence and original investigation to come later when powers are more mature and facts better known, while utilizing to the utmost the golden hour of memory? While in general we should follow the stream of continuity, temporal and causal, that does not mean that we should never work backward from the present or from effect to cause. Knowledge of the common life of the people in past periods is, of course important, and in some places, like Milwaukee, students from not only the high school, but the upper grades, go in classes to an American museum, and not only see, but sometimes attempt for themselves the processes of spinning hemp and wool, making fire with flint, weaving on looms and otherwise seeing the ways of life of our colonial forbears; but we cannot study the past without sympathy with, and in many periods attention to, monarchs and courts. Between the minstrel and the monograph, in which history begins and ends respectively, there is an immense interval, and there is room for every method known and

yet to be developed, and, therefore, need for great freedom for the individual teacher to work best where and how he is strongest, for each school to utilize every local opportunity and incentive. Is a uniform curriculum in such a vast field sacred, possible, or desirable? Is not a historic unity to a great extent an artifact, and should not the teacher here scatter all possible hints and suggestions, opening apperçus, favor browsing, begin many things that he does not finish, often attempt to be so extensive as to seem superficial, because youth, in a sense, covers more surface than depth? Should he not sow a great deal of seed upon the waters which he never expects to see again in recitation or examination, and trust something to the intuitive apperceptive powers of the young? Does not the examination type of memory often tend to keep things near the surface and in the merely cognitive stage that should sink deeper and at once affect conduct and character, and for what is history but the study of the moral character of men and races?

There are two dangers in teaching history in this unhistoric land, with no dim mythic background and with our intense absorption in the present. One is that we shall lapse to lesson setting and hearing. Just in proportion as a teacher is poorly equipped with knowledge he tends to become a mere exactor of work and takes time telling pupils what to do and testing to see if they have done it. But this is not teaching, but a device of ignorance, laziness, or physical weakness, or all combined. The teacher teaches and reduces recitation to a minimum. Whoever has visited the best continental schools or studied comparatively such national educational expositions as those at St. Louis must have been acutely impressed with the fact that we exhibit what the pupil does, Europe what the teacher does. Here he says, "Go, do this, and prove to me that you have done it." There he says, "Come, let us study together; I know and will inform, interest and inspire you to go on." A little more pedagogic insight would make us ashamed of our wretched devices to conceal, excuse or dignify our ignorance or save ourselves work. We say let the pupil find the facts for himself and then he will remember and prize them and incidentally learn to investigate. No, we should have investigated and learned to impart. The teacher should teach. We allow and even encourage callow classes to debate and discuss and weigh evidence and think we are developing judgment, and they find it far easier to discuss than to learn and are also flattered by the subtle suggestion that they can form opinions that merit the name, instead of exercising power by their crude thoughtlets, bombinantes in vacuo, they are inclined to the delusion that their mental emptiness is filled and so grow complacent with their ignorance, are opinionated where experts

differ, and with more power to achieve than to receive suffer like those who work hard on an empty stomach. Some teachers have come to fear that the pupil in the high school is actually in danger of accumulating a mass of undigested, unsystematized knowledge, and perhaps to fancy that this peril is awful and ever impending. But have any of us ever seen a dangerous mass of knowledge in any youthful mind, unless in the memory freak, and even then are we so oblivious to the laws of mental work and growth as to think that such a mass of erudition could exist in the mind without being assimilated in the child's manner, or that even if it were a vast floating plankton our petty artificial devices of correlating, associating, linking, can have any other possible effect than to prevent it from sinking deep into the soul and keeping it on the surface against the day of examination? "Oh, teacher," said a high school girl to a history teacher strong in methods but weak in knowledge, "I could understand all so well if you only would n't explain it." In these days of hypermethodic pedagogy it is fitting to recall that by the laws of his guild in the middle ages, the barber's apprentice became a master workman when he could whip up two ounces of soap into two barrels of lather. I look with some dismay upon the rank new formal methods in history, but let us not forget in this richest of all culture fields that the teacher's business is to teach and that of the pupil to learn, and that all stated recitations and examinations can never be much better than a necessary evil.

The other danger and the last is materialism. History is not primarily to teach business, tariff, economics, finance, or any utilitarian form of self-interest. There are things even in a republic yet higher than constitutions, legislature, government, machinery, politics, civics, how to vote aright, important as these things are even for girls. Does not history for all, and must it not especially for the young, suggest as its supreme lesson the power in man and nature that makes for righteousness, and is it not this that the progress of events from age to age reveals ever more clearly? Bunsen called it God in history. Some deem it the nisus of evolution that makes the best survive and the worst perish. Should we not here and there, both at great epochs and in taking a long-ranged view of the whole panorama of events, each teacher in the way he himself can feel deepest, seek to touch the religious instinct and at least occasionally try to rise to the height of the great argument that justifies the ways of heaven to man?

THE NEGRO IN AFRICA AND AMERICA.[1]

By G. Stanley Hall.

There is evidence that for centuries before slaves were imported to America there had been a slow migration of population in Africa toward the west and southwest. The weaker tribes,—Keane says, "the dregs and sweepings"—have been driven to the slave coast north and northwest from the Gulf of Guinea. Among the tribes of Dahomey, and in the Fan, Felup, Wolop, Kru, and other stirps, there has always been back of all differences a great deal of unity in social customs. Most trace kinship through the females. They are more nomadic than agricultural, sometimes resort to cannibalism, use an agglutinative speech, believe profoundly in witchcraft, are lazy, improvident, imitative, fitful, passionate, affectionate, faithful, are devoted to music and rhythm, and have always practiced slavery among themselves. In their religion the medicine man is everywhere feared, courted, but hated. They believe in charms and fetiches. Some, like the Yorubas, have an organized priesthood. Conjuring and sorcery are universal, and, one writer says, have probably destroyed more lives than the slave trade. Life is dominated by spirits. Ghosts are talked to, and medicines rubbed into weapons. Animals and plants have ghosts. Spirits do all that is unusual. They cause sickness and must be propitiated by offerings and often with bloody sacrifices. Polygamy is universal. Fecundity is high and mortality great. Strong sex instincts are necessary to preserve the race. As soon as the child can go alone it begins to shift for itself. Stealing is universal and is a game, and falsehood a clever accomplishment. The natives sacrifice everything for a great funeral. The tom-tom is their chief musical instrument, and their passion for rhythm is very strong.

Our slaves came from the long narrow belt, not many miles from the sea, or near the Senegal, Gambia and Congo. The Ashantis sometimes captured and sold almost whole tribes. The slave coast was near the angle because this offered the best means of escape in case vessels were pursued. It is surprising to see how few of his aboriginal traits the negro has lost, although many of them are modified.

[1] Address at the University of Virginia, July, 1905.

The present status of a representative tribe is illustrated in the Vei territory which is three hundred miles long and two hundred wide on the seaboard from Gallinas to Cape Mount. Much of the coast is low and at first very unhealthful for Caucasians, and during July and August, the heart of the rainy season, the downpours are terrific. Each village has its chief while the provinces have kings, and at the head of all is now Prince Momolu Massaquoi of Ghendimah, born in 1872, trained as a Mohammedan, coming to America when he was sixteen and entering Nashville College. He has now founded an industrial school where the pupils are taught English, Vei, and Arabic. His great problem is, "How can my people be saved from the corruption of the whites?"[1] The king is absolute only in certain things and is always attended by his council. Questions are settled by judges before whom the parties themselves argue, and votes are cast if the judges disagree. If one man kills another he may be killed by relatives, but if he kills his relatives nothing is done. If a worthless fellow is killed by a brave man nothing is done. When a slave steals he is only whipped; but if a free man steals, a bunch of rice straw is tied around his hand and arm and set on fire, which leaves a spotted mark forever. All public questions are settled by vote. The king is supported by presents, and ambitious subjects will sometimes give a third of their income. Soldiers are paid entirely by spoils. From the cradle the child learns the tribal legends which teach bravery and patriotism. He soon is attracted by the beautiful bow and arrow which he loves to carry, and then learns to hunt. At twelve he begins to study Vei character, and at fourteen goes to the tribal school, called Belle, in the heart of the forest. Boys are then supposed to be inside of a great monster whose growl is thunder and whose breath is flame, who nightly covers the Vei country with his palm, and is next to God the most powerful of all beings. The women and strangers believe he yearly receives all male children and swallows them. In his body the children get their education without study. They learn industry, magic, prophecy, hoodooism. A similar school exists for girls in Sandee where they learn to make baskets, fish, cook, and so on. When the boys finish school they come rushing home, killing everything that they meet except man and acts, because, as is supposed, their minds are disturbed by their new freedom. Four days afterwards a great feast is made, and, if the boy is of age, he is given one or two wives and must be called by an honorary name given in Belle, and is thereafter a man. Every girl is strictly examined before marriage. All

[1] See his article, Africa's Appeal to Christendom, Century Mag., April, 1905, p. 927.

violators of virtue are whipped, dragged over town and proclaimed outcasts. The mother engages him to a girl when he is a small child so that she can train her aright. Girls are rather secluded and dignified. The seclusion is the result of the esteem in which they are held. Even when they are captured they marry only those they love, and slaves are entitled to the respect of free women in this regard. Their labor is a part of their life and makes them very healthful. Each man is a jack at all trades. Every one must entertain strangers without compensation, and rest places are always open. The rites of hospitality may last for months.

All believe in a supreme being who supports the sky, hangs up the stars, carpets the world with green, and may be something or somebody, is called Kamba or Gol. All believe in some mediator, and this for them is perhaps a bit of stone or wood that cannot lie or steal. All these fetiches are mediators. Sacrificing babies to crocodiles is the same stage as Abraham offering Isaac. The reason Mohammedanism is preferred to Christianity is that there are no sects. God is God and Mohammed is his prophet, is all. Diverse creeds are not what the heathen require, so "they pay no attention when different sects are preaching."

The first missionary was Daniel Ware, in 1860. He was soon called away and no Vei man saw book till 1877 when there were not five men who spoke decent English, although there are now hundreds. The great need is more industrial schools. This would stop war, for the finer house a man has and the more possessions, the less ready he is to undertake its risks. Africa "is only a playground for European lions and tigers." Every European nation claims rights of possession, regarding only those of other nations and paying no attention to those of the natives. The only right of Europe to Asia is that of discovery, and because the African is ignorant and does not cultivate the land. "We think our country belongs to us." A man would not be justified in possessing his neighbor's house because he had not made improvements. Greed is at the bottom of all. The white Christians "cannot hear of a country possessing anything which can be converted into tangible profit without desiring to possess it for themselves." The African does not sell his country, and the writer knows no single case of this. Usually it is by a gift system called "dash." The English present gifts which the native understands as courtesy, and the ruler has recognition and so sends others in return. It means friendship so that the whites are invited to settle, but the Europeans keep account of every gift, and when the old king dies, at some very opportune moment the natives are told that their land has been bought. Before this often

the chiefs are called together and sign a "paper of friendship." "Not being able to read they touch the pen and somebody signs their name to the document which puts them under the dominion of some foreign power while altogether ignorant of its meaning. Naturally the natives do not take such treatment quietly and a great war is begun in which they are slaughtered like wild beasts." The wars are because the native rights have been abused and they were unwilling to be forced to obey European orders on their own soil. "The vices of civilization are as degrading as its virtues are elevating." There is remarkable contrast morally between the natives of the coast and those of the interior, because the former have been demoralized by Europeans. Polygamy is quite as common among Europeans in Africa as among natives, although it is against the codes of the former. The Europeans have introduced a still more degrading system on the coast by which the wives of a Caucasian are the wives of all his friendly visitors. The home government knows little or nothing of all this. At any rate, "nothing is done to protect the virtue of our women." European supremacy will not elevate Africa. In his native state the African is in some respects the superior of the untrained Caucasian. The two great antagonists to civilization are money-making and prejudice. The African's elevation must depend upon himself and can be attained only by admitting native lineage to power and by education. "Nearly one-half the goods imported into my territory is in the form of liquor, and that of the very worst and most injurious kind." Those who cannot get enough smear their faces with it that their people may smell it and call them civilized. Those who have the means are drunk about every day, always excepting only the Mohammedans. Even the chiefs have gone so far that the least disturbance now results in war because of rum. "I can prove from my knowledge that all the wars that have been fought by my tribe since the advent of civilization have been brought on by a rash action on the part of drinking men. My people are strong, healthy, docile, willing to work for those who have authority, and we should be considered in the disposal of our land and in the rearrangement of our social conditions. If we had not advanced as high as some, we certainly had not fallen as low until liquor came. All we want is the right to work on our own soil, to eat and drink what is good for us, and foreign powers would in the end gain financially by a wiser policy." Let us, then, have a council of friends at some central point composed of all interested to consult and read papers and devise a plan for the protection of Africans from the evils of civilization. Let a council be formed to see that the laws made by other governments for the protection of

the natives are carried out, that complaints from native chiefs reach the home government, that native women be protected, and that when European husbands abandon them they should be made to support her and her children. This society should have a journal. But the first step of all must be the demolition of the liquor traffic.[1]

F. W. Blyden[2] says that now that Great Britain has taken several large Mohammedan states under its control it should learn of the French government, which since 1830 has made special effort to study the language, methods, prejudices and likes of its Mohammedan subjects. This has produced a vast body of Moslem literature. Mohammed once prayed toward the West because he said "From that quarter crowds will enter the religion of Islam and will be among the most faithful of its adherents," and so it has proven. More than two hundred million of the human race regard this faith as final. The Koran has not been well translated either by Jones, DeSacy, Fletcher, Muir, Badger or Palmer. "Let none but the purified touch it." There is here no higher criticism to impair the steadfastness and certainty of belief, no quarrels in education to deprive the children of a knowledge at least of the letter of the Koran, the whole of which is often committed to memory. Islam means "surrender," and it is this name rather than "Mohammedan" which his followers prefer. There is one chapter in the Koran—the thirty-first—entitled "Loquam," inscribed to a negro, and Mohammed has negro descendants and had himself negro blood. A hafiz is one who knows the whole Koran by heart. Sudanic scholarship is often surprising, especially among the sharifs or descendants of the prophets. Arabic is a lingua franca or sacred language of Islam where others are spoken. The negro Mohammedan lives under a eugenic system which enables him to transmit successsors. Allen Epward's suggestion that natives might be induced to Christianity by government proclamation, and that if Christianity was substituted for Islam the natives would not appreciate the distinction, is absurd. The African Moslems object to Christianity chiefly because the desocializing influences of the missionary break family ties, while their system consolidates them and increases the population. They also resent the caste system which separates the missionaries from the people, erecting strange special buildings for him with comforts that the people cannot enjoy. The Mohammedan missionary or teacher lives and sleeps with the people and forgets his race in the intensity

[1] Much of what follows is a re-edited paper printed in the Proceedings of the Mass. Hist. Soc., 1895.

[2] The Koran in Africa. Jour. of the African Society, Jan., 1905.

of his interest in the story he has to tell. They also object to the liquor traffic. "A trade worth millions is annually carried on between the Sudan and the Mediterranean, and not a gill of spirits enters into it." We tend to emancipate the negro from the disciplinary influences of savage customs, and present him with the free spirit of Christianity to be a law unto himself. Miss Kingsley, in her trenchant criticisms, insisted that the Protestant missions did most harm.

The negro has a tropical imagination, a very keen sensitiveness to nature and an over-mastering tendency to personify not only animals but natural objects. This has given birth and currency to the rankest growth of superstition to be found among any race and which often controls daily life. Some of these, like Obi worship, sorcery, voodooism, witchcraft, can be traced back to Africa and directly connected with fetich worship. The negro's intense emotionality predisposes him to believe in supernatural agencies; the good to be worshipped, the evil to be averted or propitiated. Convinced that the powers of evil were dominating him in his hardships he often sought the aid of spells, charms, exorcism, conjuring, weird nocturnal orgies, and even sometimes sacrifices of human blood.[1] He has developed a folk-lore of wondrous richness just beginning to be exploited by the white man's song and poetry. To the timidity and harmlessness of the much hunted Brer Rabbit he has added a cunning that outwits and a sagacity that often besets his enemies, so that this animal, slightly totemized, reflects his own nature. His sympathy with domestic and wild animals and fowls often invests them with human traits and makes them vehicles of moral meanings, gives to their cries, calls and songs a human significance and sees romances suggested by their characteristic activities very much as childhood does. He projects his very life into sunshine, storm, cloud, thunder, and especially in the latter he feels the immediate presence of a supernal power. Color is poetry and the sounds of nature music. All exceptional events in nature and human life have an immediate religious meaning to him.

If the feeling of dependence is the root of religion no race has ever been so predisposed to it. Submission, obedience, renunciation, have been his dumb, unwritten philosophy. Repression, humility, resignation, suffering, renunciation, for generations made him seize eagerly the conception of another world where his long patience and pain would be rewarded and where rest and freedom, his chief desires, would be realized. His imagination, which could give even dreams reality, made the next world a merely sensuous thing. In Africa it was this

[1] DuBois: The Soul of Black Folk, 1903, p. 198.

that predisposed him to revel in the heaven of Mohammedanism to which he has there been converted with ease and in numbers probably unprecedented in missionary annals. The negro fatalism, too, so illustrated in the character of Uncle Tom, takes a very different but no less constraining form with him than with the Arabs. Indeed, it has been urged that Mohammedanism is a natural next step above fetichism and the one his race should first take on its way to Christianity. Even in this country a note of revenge sometimes creeps into his conceptions of the great day of the Lord's coming when justice would bring reaction and restitution. Here the transition has been direct to Christianity. Nearly all negroes are church members at some period of their lives, and to the negro of the lower type religion is a kind of Pythian frenzy and the devotee becomes mad with supernal joy. He communicates with God in abandon, in vision and trance. Depravity, damnation, ecstasy, goodness, heaven and hell, are a simple and forcible creed, and by proclaiming these the colored preacher represents at once the bard and medicine man as the master did the chief of the old regime on the dark continent. The church became the social centre of life, replacing tribe and clan, and is thus to-day the truest expression of the southern negro's character. The venerable rite of baptism appealed strongly to his mystic temperament, while his emotional character gave Methodism the next place, and both these churches grew in influence and usefulness as even during the days of slavery they became less local and more organized. The negro church, so carefully studied in Du Bois's monograph,[1] antedated the negro home and now gives morality among the southern blacks its chief sanction and support. Its development from the nature worship of the Cameroons in Guinea and the gold coast is one of the most interesting of all the studies of religious development.

Shaler estimates that about half a million Africans have been imported into this country. No other race ever came here without its own consent. Slavery always involves more or less artificial selection. Those chosen in Africa were usually the best available. Slave traders not only rejected the deformed, old, sick, weakly, but often took great pains to select in both sexes those who were young, large, handsome, and vigorous. In Felt's "Salem" (quoted by George H. Moore in his "Notes on the History of Slavery in Massachusetts," 1866,) elaborate instructions are given to the captain of a slave craft bound to Africa to bring home a slave cargo, directing him to select strong and young persons, whether they

[1] The Negro Church: A Social Study. The Atlanta University Press, 1903, p. 212.

were captured or bought with rum, and enjoining great care of their health on the homeward voyage. This selection of the best, which Dr. Thomson estimates has within Christian centuries robbed Africa of twenty million of the flower of its youth, has contributed, as Lecky thinks the celibacy of the best did in the early Christian centuries to the dark ages, to check the indigenous development of Africa. It has also helped to make the average Southern pure-blood negro distinctly above his ethnic congeners in the Dark Continent in stature and vigor if not in intelligence. Although the pure-blooded negroes of all tribes are unusually homogeneous, and show general uniformity in the sharpness and definiteness of their ethnic type over most of equatorial Africa (chiefs differing comparatively little from the slaves there), the Southern negro, nevertheless, owes much to this selection. This or the regimen of slavery, or both, have given him on the whole greater weight and muscular development and increased regularity in eating, sleeping, and exercise. Slavery, at any rate, found the negro a savage and left him a trained laborer, and, as was for the interests of the master, in good physical condition.

One of the best evidences of this is found in the statistics of fecundity before and since emancipation. Between 1800 and 1900 the colored population of this country increased from 1,002,000 to 8,840,000, or well-nigh nine-fold. This increase was chiefly indigenous, because the slave trade ended in 1808. At this rate of increase, in the year 2000 A. D. the negroes will number nearly seventy-five million, or, on a different basis, according to Patterson's figures, in 1960 they will number forty-three million, or will equal the total white population of the country in 1880. Their rate of increase suffered marked diminution during the war, but is now slowly approaching the rate (probably the greatest the race has ever seen) which it had during slavery. Reproductivity is still greater than these figures would indicate; for in those States and cities where statistics of death are available (for instance in Louisiana) the mortality of the negro is greater than that of the whites at every age and greatest of all under five. This is due in part to early-marriages and to loose sex relations. Few races, save the Celts, Russians, and Jews, are multiplying so fast. Their increase is markedly in excess of that of the Southern whites, which is high, and still greater than that of the Northern native whites, and greater than the increase of our total population exclusive of immigration. A race that can double three times in a century has a future. The negro's fecundity in the South is distinctly greater than in the North, he is more fertile in the country in the South than in its cities, and it is just here that he follows the great racial law of migrations,

namely, of gravitating toward those territories where he multiplies fastest. So, conversely, negroes are attracted least toward those sections of the country where their rate of increase is least. As all schemes of deportation are more and more recognized as impracticable, the problems of this race here, for an indefinitely long period, are likely to grow every year in complexity and in practical importance. This increase, it must be borne in mind, is despite the very high mortality rates, and every change that decreases this means a more rapid increase in the colored population, and this increase, not only absolutely, but relatively, is sure to be far greater in the warm South, where the negro is at home, than in the North.

No two races in history, taken as a whole, differ so much in their traits, both physical and psychic, as the Caucasian and the African. The color of the skin and the crookedness of the hair are only the outward signs of many far deeper differences, including cranial and thoracic capacity, proportions of body, nervous system, glands and secretions, vita sexualis, food, temperament, disposition, character, longevity, instincts, customs, emotional traits, and diseases. All these differences, as they are coming to be better understood, are seen to be so great as to qualify if not imperil every inference from one race to another, whether theoretical or practical, so that what is true and good for one is often false and bad for the other. Many of these differences were naturally far better understood by both races in the days of slavery and in the South than ever in the North or anywhere now; the emancipation destroyed much of the interest of slave owners in their chattels, so that intimate knowledge of the blacks by the whites in the South has in many respects steadily declined since the war. This is a faint biological analogue of what would occur if the best breeds of cattle should break up their domestication and return to the feral state; for then man's knowledge of the laws of their breeding and care would lapse, as natural selection assumed the place of artificial. On the other hand, during this period a new scientific study of the negro has arisen, and is fast developing established results which are slowly placing the problems of the future of this race upon a more solid and intelligent basis, and which seems destined sooner or later to condition philanthropy and legislation, make sentiment more intelligent, and take the problem out of the hands of politicians, sentimentalists, or theorists, and place it where it belongs, — with economists, anthropologists, and sociologists.

To select the single question of health, from many of the racial differences above enumerated, we find, in compiling many medical studies of the blacks, that their diseases are very different from ours. Their liability to consumption is

estimated at from one and a half to three and a half times greater than that of the whites. This is only partly due to their transportation from equatorial Africa, because there they are peculiarly prone to tuberculosis, and measurements show less average lung capacity than is found in the whites. Very striking is their immunity from malaria and yellow fever, which shows a different composition of the blood and which enables them to work in so many places where the whites cannot. They have extraordinary power to survive both wounds and grave surgical operations, with less liability during convalescence to reactions of fever and other complications. There is less suppuration, better and quite different granulation and scarification. Their lymphatic glands are more developed and more effective in filtering out bacteria, so that to most infections they are more antiseptic; and the specific energy of their serum, bile, and phagocytes against toxines is different from that of whites. Cancer, especially of the worst or carcinomous kind, is very rare, as are varicocele, enlarged prostate, stone in gall and bladder, and ovarian tumor. They are far from exempt from congenital deformities, whether those due to arrest or perverted growth, so that humpback, club foot, harelip, spina bifida, are unusual. There is more syphilis, but it less often results in tabes; more passion for alcohol and more consequent congestion of the liver, but less pure alcoholism. There is less insanity, mental defect oftener takes the form of idiocy, and all acute psychoses like mania issue sooner in imbecility. Epilepsy is far more common, and is connected with their general erethism. They are naturally cheerful, and so very rarely suffer from melancholia or commit suicide. The strange sleeping sickness they have practically all to themselves. Tetanus is common, chorea rare. General paralysis or softening of the brain, said never to have occurred in slavery although now sometimes found, usually lacks, when it does occur, the characteristic stage of delusions of greatness, perhaps owing to their humble position. Many eye troubles are infrequent, and various other differences have been noted. Now these distinctions involve profound diversities of constitution and diathesis. All their diseases have a different prognosis and require modifications of treatment, so that the training of physicians for the two races needs differentiation. Immune to many conditions morbific for Caucasians, they are very susceptible to others harmless for whites. In tropical Africa men and women are extremely fond of bathing, which their very active skin needs; but this disposition decreases almost exactly as clothing increases, and as the negro goes North is often changed into exceptional aversion to the bath, which is suggestive for cooks and nurses. Of course mixture

of blood with the whites brings approximation to the pathological conditions of the latter. Many of these differences are so radical that a Southern physician has said in substance, perhaps somewhat extremely, that a successful experience in treating one race impaired a physician's usefulness with the other, and made two hygienes and two regimens necessary,—as different as the application of veterinary medicine for horses is from that applied to oxen.

The chief event in the history of the Southern negro in the new world is the infiltration of white blood. But for this the negro in mind and body would be so distinct from us that all our problems connected with the race would be vastly simplified. Just how far he has lost his rare racial homogeneity here, it is impossible to tell. The extreme minimal estimate that I have found is that one-tenth have some white blood, and one maximal estimate is that two-thirds are partly white. Page thinks that from one-ninth to one-sixth are mixed. Du Bois says that two million negroes here have some white blood. Most estimates range somewhere between one-fifth and one-half. The diversity in the estimates of this proportion shows the difficulties that beset this study. Indeed, this question has itself become a part of the race problem; negroes and their friends always making the proportion large, and Southern whites regarding it as small. The negro himself has an hereditary disregard for heredity and keeps no pedigrees. Where crosses with white blood occur they are, of course, extramarital, and the mulatto's sentiments upon this subject are a strange mixture of pride and shame, while his or her white father has yet stronger motives for concealment. Thus cousins of different racial complexion and even half brothers and sisters sometimes go through life without suspecting their relationship. Scientific investigation here is usually highly resented. Many blacks and even whites hold that pale skins are sometimes produced spontaneously from black parents,—which is, of course, impossible, negro albinos being very rare. Moreover, the grade of pigmentation is not a sure index of the degree of miscegenation, and in the veins of some thought purely African probably flows at least a little of the best white blood of the land. The most serious aspect of the negro question, thus, is found in the fact that the most important portion of the race, whatever its size, inherits more or less of the best Anglo-Saxon cavalier blood, brain, and temper. Thus all the vast psychophysic differences between the two races are bridged, and they possibly fuse with each other by all imperceptible gradations. We know too little of the laws of heredity to evaluate the profit and loss of this blood mixture. It has certainly given us some of the leaders of their race in this coun-

try; and when we think of the Dumases, Pushkin, and many others, we see that it certainly can produce an occasional genius. There is much reason to think that mixture has played an important rôle in history, and that most of the great races are the result of the commingling of different ethnic stocks. Not a few (like, for instance, the Scotch-Irish) have been superior to either parent stirp. Some have held, from a study of miscegenation in other lands, that sons oftener inherit from their mother and daughters from their father. If this be so, it follows that here, where the crossing is practically all of white fathers and dark mothers, the daughters would be more Caucasian than the sons. At any rate, men like Fred Douglas, Bishop Payne, Booker Washington, Du Bois, Chestnut, Tanner, Dunbar, Thomas, and scores of others, are not typical negroes. Says H. S. Dickerman, "There are full-blooded negroes of ability, but a very large proportion of those one sees in places of responsibility and honor among negroes are of mixed race. It is so with teachers, ministers and physicians. In many of the most celebrated schools a large part of the pupils are very light, and in the cities one finds congregations in some of the more aristocratic churches in which nearly all are mulattoes."

Whatever the biological laws may be, they are, however, here obscured and rendered ineffective by social prejudice which draws a color line and ostracizes not only quadroons and octoroons, but those with one-sixteenth, one thirty-second, and, Booker Washington says, one one-hundredth negro blood, even though it be so attenuated as to leave no sign discernible save by scrutiny of hair, nails, etc., and condemns mulattoes of whatever degree to association with those whose pure Hamitic blood has known no dash or strain of white. It is this that has intensified racial solidarity and helps to make every question in the South tend to become a race question, and often now divides Southern towns and cities by a color line so drawn that instead of the best whites seeing most of the best mulattoes, the former prefer contact with the pure blacks, and race friction is between the lower whites and the mulattoes. Whether the mulattoes are better or worse than either parent, race-prejudice, not only in our own, but in every land where the races coexist, has made it impossible to tell. While there are some pure Africans born with gifts far above the average of their race, most of its leaders are those who have by heredity, association, or both, derived most from the whites. It is their aspirations, discontent, struggles, ending often in discouragement, which makes them either sink to vice or grow revengeful and desperate, that constitute the pathos of the present condition, and make it hardest for the men to preserve their hope and just ambition, and for the women to keep their virtue

in the presence of the whites. A recent writer says, "Ninety-nine per cent. of the whites regard all with any negro blood as about alike." It is idle to censure a state of things universal where a higher and lower race come into close contact; but when the South boasts of its magnanimity in aiding negro education or threatens to withdraw support and sympathy, leaving colored schools to be sustained by negro taxation alone, then, and then only, this consideration may be allowed to be not impertinent, and we may even recall Plato, who would have all parents abandon their children in tender years to the care of the State in order that the parental instinct and responsibility might be diffused and all fathers and mothers regard every child they met of similar age as perhaps their own.

Another racial trait of the negro is found in the sphere of sexual development. Special studies show that the negro child up to about twelve is quite as bright as the white child; but when this instinct develops it is earlier, more sudden, and far more likely permanently to retard mental and moral growth than in the white who shoots ahead. Thus the virtues and defects of the negro through life remain largely those of puberty. Hence his diathesis, both psychic and physical, is erethic, volatile, changeable, prone to trancoidal, intensely emotional, and even epileptoid states. W. H. Thomas, himself a negro, in his book entitled "The American Negro," says, "The chief and overpowering element in his make-up is an imperious sexual impulse, which, aroused at the slightest incentive, sweeps aside all restraint." This he deems the chief cause of the arrest of the higher development of this tropical race. During slavery regular hard work, temperance, awe of his white master, were potent restraints, and he was often a faithful guardian of the unprotected women of the household, whose head was in the army. Now idleness, drink, and a new sense of equality have destroyed these restraints of imperious lust, which in some cases is reinforced by the thought of generations of abuse of his own women by white men upon whom he would turn the tables. At any rate, the number, boldness, and barbarity of the rapists, and the frequency of the murder of their victims have increased, till whites in many parts of the South have told me that no woman of their race is safe anywhere alone day or night. Of the 3,008 lynchings in this country during the twenty years ending with the close of 1904, a clear majority are connected with murder or with this crime so often associated with it; although Governor Vardman's statistics for Louisiana showed that of over three hundred murders in that State in 1903, the great majority were of negroes by negroes, and the most common cause was quarrels arising over the game of crap. There has also been a gradual increase in the barbar-

ity of this punishment for rape, slightly known before the war. The brutality of these assaults is often such that the most staid communities and heads of families, who have strongly and publicly denounced lynching, find themselves swept away in a frenzy of vengeance. When such a crime comes home to one's own wife, daughter or mother, none of us know what we should do. As a preventive of crime, lynching has something to be said for it, but more to be said against it. This wild justice is brutalizing upon those who inflict it, who are usually young men and boys. Some drastic cures have been suggested, — a drumhead court-martial with immediate execution of the guilty, emasculation, instant trial and abolishment of appeal, and even the legalization of burning at the stake. These suggestions show at least how desperate is the resolution in the white South that this crime must be checked at whatever cost. One typical aggravation of the evil is illustrated in a certain Southern district known to the writer, where the youngest and most briefless and inexperienced lawyer is, by an old custom, elected prosecuting attorney. He can receive five dollars for trying each case. His inexperience naturally often causes errors that give ground for appeals and delays. The chief need is that the leading negroes should speak out more strongly against this crime than they do, and no longer give cause to writers like Mr. Page to insist that the race as a whole covertly sympathizes a little with every black victim of a mob, no matter how atrocious his crime, and perhaps with every black criminal. They should feel their own responsibility, and cooperate with the law in enforcing justice and teaching their race not to palliate crime or even shield criminal members of it. The negro's sense of the enormity of the crime of ravishing does certainly seem to differ somewhat with that of the whites. If negroes were listed and all the vagrants kept track of, as in Germany, if officers had power to summon posses, or if sheriffs gave bonds to be forfeited if they lost their prisoner, or negro officers were given interest in the punishment of criminals of their own race, some help might be found. In a paper of this kind of course only a very few of the points involved can be touched on.[1]

After the war the majority at the North sanctioned the policy of giving the negro the ballot, which Lincoln disapproved and which had been persistently refused him in many Northern States. It was given, if not as a penalizing measure to those lately in rebellion, at least as a weapon to safeguard the freedom of these new wards of the nation. Then followed the eight years beginning with 1867, so tragic for the South, involving

[1] See the Atlantic Studies.

enormous waste and confusion, an indebtedness equalling the entire cost of the war plus the value of the slaves as property, negroizing more or less one-third of the States of the Union until they seemed to be on the downward path toward conditions like those of Hayti, San Domingo, or Porto Rico. Whatever allegiance and friendship the negroes had felt for their old masters was transferred to their new Northern allies. For myself, an abolitionist both by conviction and descent, I wish to confess my error of opinion in those days; and I believe that all candid minds who, in Kelley Miller's trenchant phrase, study rather than discuss the problem, and are not too old to learn, are ready to confess mistakes. Even the Freedman's Bureau helped make the colored man at the South feel dependent upon the North rather than upon his own efforts. Much as the new South has done to outgrow these evils, perhaps the worst effect of all these years is now seen in the fact that Southern negroes are a solidified party arrayed against their old masters on all questions, and cannot divide freely among themselves even on local and economic problems, or follow their own interests, but the party and color line still coincide.

At the Republican National Convention at Chicago in June, 1904, a plank was proposed demanding reduced representation in Congress and in the electoral college for such States as eliminated the elective franchise unconstitutionally.[1]

The democratic platform protested that this would bring again in aggravated form the hateful race animosity, now well on the way to healing, and would draw again sectional lines obscured by the fact that men from the North and South had stood together at Pekin and Santiago. All States of this Union have certain limitations of suffrage; idiots and lunatics; in two States, dualists; in one, bigamists; in ten, paupers; in several others, those who have not paid their poll tax or all taxes, while California, Nevada and Oregon ignore the fifteenth amendment which forbids the exclusion on account of "race, color or previous condition of servitude," exclude Chinamen. In any Southern State negroes are now admitted to the right of suffrage if they can read and write, and in Louisiana, South Carolina and Alabama even the illiterate black, if he pays taxes on three hundred dollars' worth of property, can vote, while in Virginia, Alabama and Mississippi all who served on either side in army or navy in the Civil War are admitted to suffrage. To be sure, in some of the Southern States the Constitution must be read and understood or the negro must write an application in the presence of the inspectors, and by the famous grandfather clause whites who descended from those

[1] See The Negro Issue, by J. P. Dunn. Indianapolis, 1904.

who took part in the Civil War are exempt from these qualifications. Mr. Crumpacker, like Mr. Dunn also from Indiana, has repeatedly introduced proposals to restrict representation in the South. These methods were a slow development of a reaction by intelligent citizens against a saturnalia of political corruption that arose under negro rule. The unfairness of the proposition to determine representation by the basis of votes cast is seen in the fact that in 1900 Massachusetts cast only 414,801 votes out of a voting population of 843,456, but this minority of its voters elected fourteen Congressmen, or an average of one to every 29,655 votes. Nevada in the same year cast only 10,196 votes with a voting population of 17,710, but these voters elected their member of Congress, two Senators, and three presidential electors. So far as national government is concerned we find that one voter in Nevada has fifteen times as much power as a voter in Indiana. If any one doubts the evils of wholesale negro suffrage he should glance at the literature.[1] The curse of the negro colonies lies in the fact that ninety-nine per cent. of the whites regard all negroes as being alike.

Republican leaders are ready to throw negro suffrage overboard and take compensation in a reduced representation of the South, for their platform expressly states that if the franchise is unconstitutionally limited the representation shall be reduced. They propose to let the constitutional right of the negro go and take political advantage in place of it. Again, the whole question of educational qualification for the right of suffrage is at stake. Indiana, for instance, pays eight million dollars a year for public schools and makes education compulsory, and yet it says to the boy who manages to grow up illiterate, "You shall be allowed to vote even if you do not learn to read and write." Governor Aycock, of North Carolina, the hero of "The Leopard's Spots," resisted successfully the movement in his State that taxes paid by whites should go to support white schools only and that the black schools should receive only the taxes paid by the blacks. Having taken from the ignorant negro the power to vote it becomes us to safeguard every right he has.

Before the war the negro was often a skilled laborer. Nearly all the agriculture of the South and most occupations pertaining to food, clothing, and shelter were in his hands. The old plantation was an industrial school, not entirely without analogies to the old New England farm which has trained so many of its best citizens. When freedom came it was naturally in-

[1] See for instance P. A. Bruce: The Plantation Negro as a Free Man; J. A. Tillinghast: The Negro in Africa and America.

terpreted as freedom not to work, and so came the *au rebours* days of misery where so many Southern novelists and essayists are finding rich fields for literary exploitation.

The situation in certain southern countries which have overlooked the value of industrial education is well illustrated by a story told by the late Henry W. Grady about a country funeral in Georgia. "The grave was dug in the midst of a pine forest, but the pine coffin that held the body was brought from Cincinnati. Hickory and other hard woods grew in abundance near by, but the wagon on which the coffin was drawn came from South Bend, Indiana, and the mule that drew the wagon came from Missouri. Valuable minerals were close to the cemetery, but the shovels and picks used in digging the grave came from Pittsburg, and their handles from Baltimore. The shoes in which the dead man was buried came from Lynn, Massachusetts, his coat and trousers from New York, his shirt from Lowell, Massachusetts, and his collar and tie from Philadelphia. The only things supplied by the county, with its wealth of natural resources, was the corpse and the hole in the ground, and Mr. Grady added that the county probably would have imported both of these if it could have done so."

At this point of Southern despair came one of those masterly pieces of statecraft in the last century—masterly because so simple—in the policy of Booker Washington. Let our race, he said, be as separate socially and politically from the whites as the ten fingers, though industrially as united with them as the fingers are united in the hand. Under the reconstruction era, he says that the chief desire of all bright young negroes was to hold office and to study Latin, and he declares that it is against these two desires that the efforts of his life are directed. More than a score of simple industries are taught. About these nearly all book learning is made to centre. Instead of the one-crop system he would have at least half a dozen. He teaches women to work in the field and garden, as they do at Swansley, England; establishes penny banks; teaches to work in wood, iron, lead, and leather; to raise poultry, cattle, pigs, mules; to build houses, make clothes, and, in short, to resume in freedom the control of the industries they had in slavery. His people resisted; for even industrial education suggested to them a return to slavery. Along these lines, also, he conducts summer conferences which attract negro farmers from every State in the South, and makes slow but effective headway against the extortions of tradesmen who thrive on the negroes' improvidence and credulity and those who sell on the installment plan or advance money on crops yet to be gathered, levy extortionate rents, etc. Under this policy the negro waives for the present the right of

suffrage and office-holding for the ignorant, or at least welcomes an educational qualification. For myself, I doubt if any educational institution in the world's history ever showed, in those who attend from year to year, greater progress along so many lines,—dress, manners, intelligence, morals, health,—than is seen in the pupils of Tuskegee. Thousands of schools of lower grade are being permeated by this influence, and the negro is winning recognition, and, what is quite as important, is content to do so on his merits. The only modification of Mr. Washington's programme that seems needed is that which Professor Du Bois pleads for, namely, opportunity of all the higher cultural elements of education to every negro who can take it and make use of it. The only shadow that clouds his future now is the danger, happily diminishing, of the interference of Congressmen of the Crumpacker type with the existing state of things,—confessedly tentative and provisional, grandfather clause and all,—and the growing danger of an influx of white labor and of trade unions, most of which exclude negroes. Their ascendency in the South would make wreckage of all the now promising solutions of these vastest of all our internal problems. Under this programme the negro will prefer the country to the city, the South to the North, and will slowly develop his full rights on an industrial, economic basis, for money and business know no color line.

The course marked out by prudence and common sense would therefore seem to be that the negro should now address himself to the solution of his own problems, carry on the work of studying his race so well begun at Atlanta under Professor Du Bois, and make his own social life as he has made the life of his church (which is its chief centre, and also its most characteristic expression, to which nearly every negro belongs at some time during his life), and recognize that his race has gifts that others lack,—such as an intense and large emotional life, an exquisite sensitiveness to nature, gifts in the field of music and oratory, a peculiar depth of religious life (connected in part with the sense of dependence, which is its psychic root), a strong belief in invisible powers, a certain sense of fate (which in Africa predisposes the natives to Mohammedanism, which is said to be growing as fast as any religion ever spread and which some think a kind of next step above fetichism), rare good humor, jollity, patience, etc. An African museum has been suggested in which should be gathered the folk-lore and records of tribal customs (which a parliamentary commission in Africa has just found to be very elaborate, and, in many respects, better for the natives than English law, and of which many traces survive here), the anthropological literature upon the race here and elsewhere, and mementoes of Hamitic cul-

ture generally. Some have suggested a special permanent commission of those most competent and interested, white and black, to be consulted both by philanthropists and legislators. One of the most hopeful facts in the situation is that there are now for the first time such experts. Their knowledge certainly ought to be utilized. This we have notoriously failed to do in the case of the Indian. There seems a water-tight compartment in Washington between the Indian Bureau presiding over the material interests of the red man and the Ethnological Bureau devoted to his study. Even the Mohonk Conference has never, I am told, with one exception heard the voice of one of these specialists who best know the facts upon which all our Indian policy should be based. Let no such mistakes be made concerning the negro. He has capacities for friendship, loyalty, patriotism, piety, and industry in regions where white men cannot work, which in some respects, perhaps, exceed ours and which the country sorely needs. If he can only be made to accept without whining patheticism and corroding self-pity his present situation, prejudice and all, hard as it is, take his stand squarely upon the feet of his race, respect its unique gifts, develop all its possibilities, make himself the best possible black man and not desire to be a brunette imitation of the Caucasian, he will in coming generations fill a place of great importance and of pride both to himself and to us in the future of the republic. The chief fact in the present situation is the at last rapidly growing tendency to commit the problems of his race more and more into the hands of its own members. If this is not done gradually and wisely enough, and if the present promise of leaders within the race is fulfilled, all will come out best for both races in the end.

LITERATURE.

Kinder Zeichnungen, VON S. LEVINSTEIN. Voightlaender, Leipzig, 1905. pp. 119.

This interesting, unique and expansive volume, with eighty-five full page tables and eighteen tables in the text, and one hundred and sixty-nine drawings added to the one hundred and nineteen pages of text, seeks to trace the development of drawing from the very beginning in children up to the fourteenth year, with parallels from the records of primitive man, culture history and folk-lore. The whole is a much amplified dissertation wrought out with the aid and suggestion of Professor Lamprecht, of the University of Leipzig, who has seen the importance of a study of childhood for his department of culture history, and has issued an elaborate questionnaire in various languages asking for specimens of children's drawing as material for his general history of mankind.

The human figure is the shibboleth of art. Thus, basing on the thirty-four thousand children of Lukens, our author constructs a number of curves which show the following: At four, less than 40 per cent. of the children attach feet to their human figures, while at five, 83 per cent. do so, and from this point on to thirteen the increase is slightly more regular. Arms at four are attached in 45 per cent. of the drawings; at five, 67 per cent.; at seven in 80 per cent. The body begins with 50 per cent. at four, springs to 82 per cent. at five, 92 per cent. at six, and thereafter is more common. Another table shows that the beard, beginning with 1 per cent. at four, rises to 26 per cent. at five, and at twelve attains its maximum of 60 per cent. Hair is found at 6 per cent. at four, in 26 per cent. at five, progresses very steadily from six to ten when it has reached 70 per cent. The neck is drawn by 8 per cent of the children of four years of age, 22 per cent. at five, 79 per cent. at ten, 93 per cent. at thirteen. Legs with outlines and not mere lines begin at 17 per cent. at four and at seven have reached 88 per cent. Eye-lids or brows begin at 9 per cent. at four and progress with great steadiness to 87 per cent. at nine years of age. Arms have outlines in 6 per cent. of the children at four, and progress rather steadily to ten when they have reached 79 per cent., at thirteen 91 per cent. Feet are in profile in 15 per cent. at the age of four, 54 per cent. at the age of five, 87 per cent. at the age of nine. The nose is seen in profile in 6 per cent. at four, 34 per cent. at five, 79 per cent. at nine. The arms in profile appear in 1 per cent. of the drawings at the age of four, and progress more slowly, reaching only 39 per cent. at eight, and 70 per cent. at thirteen. Eyes and mouth in profile begin with 2 per cent. at four and advance gradually to 71 per cent. at thirteen. The rump in profile begins with 1 per cent. at four and ends with 62 per cent. at thirteen.

Young children usually draw the face in a full front view, but at the age of four, 4 per cent. of them introduce some profile, some heads being drawn with some features, especially the nose, both in profile and in front. At seven 34 per cent. show transition stages, and from that age, and especially from nine, on, the transition features are dropped out and the profile, where presented, is consistently such. The hand begins at four with 32 per cent. and at seven has reached 76

per cent., and reaches its apex with 89 per cent. at eleven. Buttons begin with 30 per cent. at four and progress rather steadily to 81 per cent. at eleven. The hat in pictures of women begins with 24 per cent. at four, 49 per cent. at five, and at ten has reached 90 per cent. The dress of women begins with 16 per cent. at four and advances rather regularly until at thirteen it appears in 99 per cent. of all the cases. Decorations of the woman's hat begin with 14 per cent. at four, have reached 28 per cent. at five, and thence advance pretty steadily to 71 per cent. at eleven.

A well known nursery poem, used by Barnes and others, entitled "Hans Look-in-the-air," recounts the troubles of a boy prone to gaze upward, who tumbled over a dog. Once when watching the swallows he fell into the river where three fishes wagged their heads, and whence he was rescued, dripping, while his writing book drifted out to sea. In illustrating this picture 21 per cent. of the children at six attempted to draw the swallows. They appeared with rather regular yearly increments to eleven when they were seen in 78 per cent of the pictures. In these pictures plants or trees are drawn by 7 per cent. at six, by 54 per cent. at fourteen, although they are not mentioned in the poem.

At the age of six only 9 per cent. of the children's drawings of houses represented more than one side of the house. At fourteen 54 per cent. did so. In the Hans stories 27 per cent. of the children at six drew a house, at the age of twelve 80 per cent. while at fourteen the houses declined to 56 per cent. houses not being mentioned in the poem. Later this method was superseded by a series of pictures illustrating different phases or stages. This transition occurs chiefly between seven and eleven. At seven years old, out of a total of 4,943 drawings, 78 per cent. of the boys and 75 per cent. of the girls drew fragmentarily, while at eleven only 11 per cent. of the boys and 13 per cent. of the girls drew in this way, the rest having adopted the method of series of pictures. Other tales gave a similar result. Interesting, too, is the fact that at the age of four the hat is transparent in 24 per cent. of all the cases, and at nine in 60 per cent., after which transparency steadily declines, while clothes are most transparent between six and nine, when they reach 23 per cent., declining thereafter to 0 at thirteen.

Levinstein, like his master, Professor Lamprecht, is a profound believer in the recapitulation theory, and held that these essential features in the development of drawing are found among the children of all races and are closely paralleled by the records of savages and cave dwellers. The development of pictorial art in Germany, according to Lamprecht, is best presented in the following five stages: symbolic, ornamental, typically conventional, individualistic, and subjectivistic, and even here we find some ontogenetic parallels. The pedagogic inferences drawn are obviously that children understand and best represent their own art, which is of a unique type, which the adult no more appreciates than children appreciate the adult type. The importance of drawing is that it aids us to see, teaches the hand, and develops the powers of observation. For color the child has little or no appreciation before two. The records of the large per cent. of Berlin children who had never seen a living hare, squirrel, snail, lark, crow, duck, frog, butterfly, etc., shows the mal-adaptation of our drawing courses. For young children drawing is a language. Girls tell things in pictures more voluminously than boys. Children draw with the understanding, after all, more than with the eye. Among the lowest people there are good and bad drawers. Indeed, in Australia this talent seems more generally diffused than in Europe.

In the cuts, many of which are illustrated, certain children show marked traits of genius very early, and pathetic is the case of many who are very slow in their school work who exhibit very marked ability in drawing, which is especially prone in boys to take some specific direction.

Report of the 19th Annual Meeting of the New England Association of Colleges and Preparatory Schools.

This recently issued document is of a unique and rather weird interest. President Eliot recounted in an opening address what had been gained in uniformity of college admission requirements during the past twenty years. It was an old theme, and the landmarks in the movement were hastily reviewed; and Mr. Tetlow as usual followed President Eliot and as usual spoke well. The real soul of the meeting was perhaps expressed by Mr. Coller, head master of the Roxbury Latin School, who began and ended and interspersed his speech with compliment and adulation of President Eliot; but he ventured the assertion that college dominance over the high school had been unfortunate, that "Harvard has finally screwed up the requirements for admission beyond what is reasonable and beyond what is possible to be met," and declared that in the period under review exactions had increased 50 per cent. and this was "the enormous mistake that Harvard College made." "This is a great evil. The schoolmasters are hurried and worried, the boys feel driven, and feel that their own rights to a certain amount of freedom are invaded and trespassed upon, the parents protest and complain. In my own school once preparation for Harvard was an incident in the course of study. Now we do all we can to get the bare requirements and we cannot do it and I feel hurried and worried." He is reminded of the Hebrews compelled to make bricks for the Egyptians and when they cried out that it was too much, their taskmasters even took away the straw. It is bad for the schools and bad for the colleges. Mr. Coller ascribes the trouble to well-meaning young men who come on to the faculty of Harvard and seek to make a good name for themselves and for their departments. He declares that the association of high school and college men in all this wretched business has been on the part of the latter with a certain benignant condescension and perhaps partial amusement. Some of them would even make petty concessions. One result of this state of things is that a smaller and ever smaller fraction of boys pass their examinations, but enter with conditions or are rejected.

It is indeed a pedagogically wretched state of things that is fastened upon New England high schools by the mistaken policy of the president and certain members of the faculty of Harvard college; and it is high time that the truth, which everybody cognizant with the facts knows, should be plainly spoken, which is, that the two motives now dominant in this abuse of power are, first, the desire to appear to outrank other New England colleges by insisting on superior requirements, and, secondly, the reluctance to confess what more and more are coming to see was, if not an initial error, at least so outgrown that it has become an almost unmitigated evil. The wealth and age of Harvard and the fame of Boston culture has given it great popularity with both the wealthy and the ambitious classes so that it is able to reject from a quarter to a half of all who apply and yet to show the steady growth in the number of pupils that all such institutions must show.

To gratify this very petty ambition and seeming to be more select in the admission of its raw material Harvard has sacrificed far more precious things, and has especially neglected to look to the finished product which it turns out at the end of the course. That there will

come a revulsion when President Eliot's dominating personal influence is withdrawn that will result in immense advantage to the actual work of the institution and even to the quality of its students in renouncing this idolatry of the standard units, blocks, credits, no one outside the immediate Harvard circle sphere of influence doubts. Meanwhile the incubus of the system upon the high schools, which are the people's colleges, is deleterious to a degree which, were it fully understood, would cause an immense revolt. The Harvard administration should give its entire attention to inside improvements and reforms, and seek to do the best that can be done for those who have actually entered during their stay within its walls. It is no argument in support of this system that it has fastened its octopus grip upon a number of other eastern States in the uniform entrance requirements of the new board. It is all the work of mechanicians and not of educators, of outside presidents and principals and not of inside men. Every high school in Boston would do far greater good to the aggregate of talent within its walls if it were freed from this college tyranny. The whole history and proceedings of this Association contains little but the jingling of the college entrance keys; most of those interested in education have long since lost interest in it. It can now with great authority be said that the present tests are not the best measure of ability, but that boys of 18 or 19 that have strong and many-sided interests are abler and do better work in the world if they have given their preparatory years to a freer method and to a different class of topics from those that are now standardized, threadbare, shopworn.

Head-master Coller is one of the very few who have ever spoken out, dared to speak out in these meetings in hearty protest against existing tendencies; protests which are incessantly made in private with great bitterness by nearly all high school principals and teachers who have manhood and educational insight left after this long selective process of nearly a generation that has tended to weed out from the high schools all such men and to develop in their place those who were servile, bureaucratic, contented to be patted on the back and flattered as good fitters by the revered authorities of whose authority but not whose learning they stand in such awe.

Sunday School Problems, by AMOS R. WELLS. W. A. Wilde Co., Boston, 1905. pp. 297.

This volume is chiefly reprinted from separate articles and addresses by the author during the last seven years. The author's preface begins, "If you are looking in this book for a systematic treatment of the subject, for big words and philosophical analyses, I am afraid you will be disappointed. But if you want to know what practical Sunday School workers have found helpful in solving the principal problems of their work, I hope you will be aided by these pages." He thinks actual teachers are not interested in the theories or criticisms, but chiefly in "how to get Bible wisdom into Tom Jones and Susie Brown." This is a key to the work. It is ostentatiously practical only. It deals with such topics as, how to get home study, what to do with backward, disorderly children, when attendance wanes, when the hour is cut short, the value of fun, the blackboard, patriotism, evidences, decision day, Bible marking, how to tell a Bible story, the superintendent that needs a muzzle, etc. The author's idea of the higher criticism is expressed by an original parable of people just beginning to rear a beautiful and magnificent building, held up by the young gentlemen, "all with lofty foreheads, all with primly self-satisfied air, and all with spectacles," who proceeded to chip the stone

and dispute about its biological age. How calamitous had the boy Gladstone been given a polychrome Homer, or Charles Lamb had been fed with the Baconian theory. We do not wish to teach untruths or guesses at truths. "The young," he states, "have no skeptical tendencies. They have no difficulty with miracles and other manifestations of the supernatural."

On Becoming Blind. Advice for the use of persons losing their sight. By ÉMILE JAVAL. Tr. by Caroll E. Edson. The Macmillan Co., New York, 1905. pp. 191.

This is a pathetic narrative of a well known oculist who lost his sight suddenly in his sixty-second year. His effort was focused on how to live with his infirmity with the least inconvenience to others and with the greatest chance of rendering continued service to mankind. He apologizes for being a novice in blindness. He has a frontispiece representing himself on a tricycle with a seeing leader. He then proceeds to discuss in detail meals and eating, methods of keeping track of time by day and night, walking in town and country, reading aloud, the braille, dwelling, neatness, hygiene, health, music, games, tobacco, mnemonics, his ideas of marriage, etc. He has become rather an enthusiastic devotee of Esperanto, is doubtful about the sixth sense, devises maps, plans and sketches to save himself and his friends trouble, has devised new methods of writing. On the whole the book is replete with psychological and pedagogical suggestions which cannot fail to be of intense interest to all whose attention has been called scientifically or practically to the subject.

A Boy's Control and Self-Expression, by EUSTACE MILES. Published by the Author, 10 St. Paul's Road, Cambridge. pp. 572.

This author is an honor coach and lecturer at Cambridge, England, also tennis champion, who has already written much that is wholesome on physical exercise and training. The merit and even charm of this book is that it takes a breezy, natural, healthful, English view of sport. There is almost nothing in it from beginning to end that suggests erudition. Physical training and games are for this author chiefly to teach control of appetites, regularity, sportsmanlike spirit, to develop the sense of honor in a normal way, and to favor self-expression. The experience of the author in many forms of sport is a constant fund of illustrations from which he draws, which give his book great zest. He believes body care leads to purity, favors the control of will over a life, predisposes to making a better map of it, develops individuality normally, gives buoyancy, etc. We are not told precisely how this book originated, but it suggests short talks or articles, somewhat occasional, put together. At any rate, the book throughout smells of the playground and out-of-door, and not at all of study or of books.

Lynch-Law. An Investigation into the History of Lynching in the United States, by JAMES ELBERT CUTLER. Longmans, Green & Co., New York, 1905. pp. 287.

Few people are able to read about lynch executions without shame. Indeed, W. G. Sumner says, "It should be a disgrace amongst us if men should burn a rattlesnake or a mad dog. The badness of the victim is not an element in the case at all. Torture and burning are forbidden not because the victim is not bad enough, but because we are too good." The various chapters here consider the origin of the term, "lynch-law," its early operations, its development in 1860, the reconstruction period, lynchings described, the justification of the law, and some remedies. All is illustrated by many charts, curves and tables.

Les Anomalies Mentales chez les Écoliers, par JEAN PHILIPPE et G. PAUL-BONCOUR. (Bibliothéque de Philosophie Contemporaine.) Félix Alcan, Paris, 1905. pp. 156.

These authors first classify the various groups of abnormal children. They then discuss the following topics: the backward scholar, the unstable child, the anæsthetic, epileptic and hysterical children. After defining intermediate states and subnormal pupils, they pass on to discuss the true and false abnormalities, and the question of what constitutes pedagogic backwardness. A final chapter is devoted to minor anomalies.

Harvard Lectures on the Revival of Learning, by JOHN EDWIN SANDYS. University Press, Cambridge, 1905. pp. 212.

These seven lectures treat respectively of Petrarch and Boccaccio; the age of discoveries; theory and practice of education; the academies of Florence, Venice, Naples and Rome; the homes of humanism; the history of Ciceronianism; the study of Greek.

Ein Knabenleben vor sechzig Jahren, von FRANZ PFALZ. I. Teil, pp. 146. II. Teil, pp. 112. Thr. Belser, Stuttgart, 1904.

This pedagogue here reviews his life, beginning with his early childish recollections of those about him; his first experience in school; the effects of Bible stories; the first railroad ride; his bashfulness; his reveries by twilight; the influence of the village bully; bad and good associates. He then describes the romance of the Flegeljahre. Gradually his personality awoke. Confirmation had an important function in this respect. The volumes both end with the close of this formative period.

The Story. An Epitome of History. By WILL HALL. Vol. I, pp. 86.

This is an attempt to tell the whole story of the universe, from the beginning of things to the rise of socialism, in the form of a story.

Grammar School Algebra, by DAVID EUGENE SMITH. Ginn & Co., Boston, 1904. pp. 154.

Specimen Letters, selected and edited by ALBERT S. COOK and ALLEN R. BENHAM. Ginn & Co., 1905. pp. 156.

We have here some eighty-eight letters of modern, with an appendix containing a few ancient letters. Most of the selections are within a period of two hundred years. Letters before 1700 would have seemed stiff and archaic. The authors are greatly hampered by copyright, although many publishers have courteously given them permission, but it certainly seems to us that these selections might have been far better made. Whether the authors were limited by this or by some other consideration is less apparent.

A Primer of Forestry. Part II. Practical Forestry. By GIFFORD PINCHOT. Bureau of Forestry, U. S. Department of Agriculture, Washington, 1905. pp. 88.

The first part treats of theoretical, and this of practical forestry. Like its companion volume it is copiously illustrated and describes various sylvicultural systems, work in the woods, water and streams, forestry abroad and at home.

American Phonography, by W. L. ANDERSON. Ginn & Co., Boston, 1905. pp. 324.

This book contains a complete exposition of the system called American because of its wide adoption here. The newest Pitman features have been introduced.

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WHAT IS PEDAGOGY?[1]

By G. STANLEY HALL.

The Greek pedagogue, from whom the term pedagogy was derived, led the boy to and from school, and was his keeper rather than his teacher. The word has expanded from its etymological meaning and is a general designation for the art of teaching. Twenty years ago the term was not held in honor in academic circles and others were preferred. Years ago a classical professor in a vivacious article declared that, in his mind, it was associated with pettifogging and was a word that he always tried to avoid, and thought its connotations vulgar. In many minds it is still associated with teaching in the primary grades and for college and university work had little meaning. In the designation of academic chairs the term "Education" was preferred and if pedagogy had a place it was thought to be chiefly in the normal schools. Its respectability and its scope, however, have steadily increased in recent years, till I think we may fairly say it should now include both didactics or the methods of teaching or imparting knowledge or instruction generally on the one hand—all those processes by which information is given—and on the other, education or development from within outward. Thus we may properly speak of the educational value of all instruction, and we are coming to see this varies much for different subjects of the curriculum. Education is more humanistic and evolutionary, and aims to unfold all the powers of the individual to their maximal maturity and strength and is essentially cultural; while teaching, learning, and didactics generally consist in transmitting knowl-

[1] Introductory lecture to the popular Saturday courses, given at Clark University, Saturday, September 30, 1905.

edge by the most economic and effective means from those older and wiser to those younger and more ignorant. The soundness of an educational system depends upon its educational value and, in our department, the great danger is that impartation will take precedence. The third section of our field may be called drill or discipline. This is essentially practice in habituation and in facilitating and reducing the time in which the mind handles the noetic material given to it. This we can impart as dressure or training even to animals and idiots for whom we cannot do much that can properly be called education. The term "teaching" means building into, and applies more to acquisition than to development. Influence involves more commonly the personality of the teacher, while suggestion is penumbral or marginal, and includes not only conscious hints but unconscious stimuli. Thus I would reserve for pedagogy the wider connotation of all these influences.

The condition of pedagogy in this land and elsewhere is far from satisfactory, but is slowly and surely improving. In the German universities, philologists have for several generations had seminaries of a more or less pedagogic character, designed, along with the impartation of knowledge, to make the teaching of the candidates for positions in classics more effective. Professors of both Catholic and Protestant theology, representatives of different systems of philosophy, and occasionally others have given pedagogic courses with the primary object of indoctrination and of inclining future teachers toward their several points of view. To-day in all Germany I can find but two or three professors whose chief work is pedagogy, and I doubt if in this country we should be satisfied with their work. It certainly does not compare favorably in intellectual standards with that found in the other departments. Histories of certain fields, grades or periods of education that are monuments of erudition, have been written by historians and others. Several normal, gymnasia and other teachers have occasionally given courses in the university, one or two of whom have never themselves taken an academic degree. Their work usually concerns itself with lower grades, and neither their colleagues nor the cultus ministry would favor the treatment of university policies with academic freedom. In the higher institutions of Great Britain little or nothing has been done, and the same is true in France. The best educational work on the continent is done, for the most part, by representatives of the secondary schools, especially in the German normal schools, where sometimes the history of education is taught with very great effectiveness, and is chiefly relied upon to give an *esprit du corps* to young teachers and to make them respect their vocation. Much of the best pedagogic literature in Europe is by the in-

spectors and supervisors, while school physicians, and occasionally literary men have made contributions of value. The best journals in Germany are very specialized and there is no such central organ as the *Revue Pédagogique*, and in England periodic literature on the subject is still more inadequate. In this country, until recent years, almost no academic work has been done. Professor Payne, in Michigan, was almost the pioneer. College and university presidents took no interest and some were actively opposed to the introduction of such a department. Authorities have been singularly without concern for the interests of their own graduates. In some institutions where a third of them teach for a time, there has never been anything in the courses that was designed to help them. This is sometimes due to apathy and sometimes to suspicion, sometimes to prejudice, sometimes to all combined. This neglect, especially in the girls' colleges and in institutions, seems to me almost reprehensible. The chief motive, however, that has stimulated the foundation of so many departments of education under various names in American colleges and universities within the last few years, has been the recruiting service it is hoped they may render in making easy and broad the way from high and preparatory schools to entrance classes. Many of these recent appointees are essentially recruiting officers of the institution and spend a good part of the year in visiting preparatory schools, seeking to find places for graduates of the college on the one hand, and on the other, to co-ordinate entrance requirements and high school curricula. A modicum of their time and energy is given in the institution to those intending to teach. With these limits of course very little can be done and that is mostly for high school work, because this is most nearly connected with the interests of the institution. In this work very great stress is often laid upon those matters pertaining to co-ordination of high school and college work. Sometimes conferences for teachers are held after school hours or on Saturday. In a few institutions, genuine and disinterested service to the public school system is earnestly sought but all this work carries great handicaps—now in the meagre time that can be devoted to it, now in the qualification of the instructors who are sometimes ex-school officers or those who would prefer to teach other subjects, and perhaps do so in part. The well trained academic professors, devoted heartily to pedagogy as a department, as well trained for their work as those in others, are very few. College presidents here would not favor teaching the history of higher education, or discussing academic questions, nor the advocacy of any methods disapproved by any large number of fitting teachers, so that the conditions, although steadily improving, are still very far

from satisfactory, and we often hear in educational addresses from presidents and professors amplifications and illustrations of the fact that education is neither a profession nor a science.

We lack, but greatly need, three things.

I. A history of the philosophy of education. Plato, Aristotle, Bacon, Locke, Kant, Hegel, Herbart, Comte, Lotze, Bain, Herbert Spencer, and many others have attempted to lay down fundamental principles as to the goal and means of education and to give it a scientific character. These theories are each partial and, alone, inadequate They are usually based upon a theory of human mind, of nature, of society, or all of them, and appeal to far higher faculties, and give the subject a greater dignity than it yet had. Nor are these topics treated in a way hardly worthy of mention by the histories of education. I think it a matter of congratulation that a former member of this institution, who began the subject as his dissertation five years ago, has left his chair in another university for a year to go abroad and finish a greatly-to-be-desired text-book in this subject.

II. Secondly, we lack a history of education. There are, of course, plenty of manuals in the various languages, but they deal almost entirely with the lower grades, and none of them include academic work, the history of universities or learned societies, all of which are themes full of interest and even inspiration. This water-tight compartment between the higher and lower stages of education has operated greatly to the disadvantage of pedagogy. School men have little sympathy with academic history and spirit because they have little knowledge of it, and the converse is true perhaps in even greater degree. This is truer in the East than in the West. Where can be found material which is of greater intrinsic humanistic interest or importance or is itself a higher educational value than the story of the foundation and organization of the great universities in the middle ages, from Salerno down, as they were founded mostly in groups to express or secure some great cultural good it was believed mankind had attained? All of these great movements were profoundly affected and very often directly inspired by one or more of the scores of learned but always more or less secret societies which were founded in the various lands to keep alive the love of truth and to secure freedom of thought and investigation. Spiritual and temporal powers were sometimes opposed, and sometimes competed in this great work, and the development of popular schools is given a larger background and a broader mental horizon when treated from this higher standpoint. So, too, religious education has a history of its own which should be included in this field.

III. Third, we have no handbook which even attempts to summarize the results of the very special and more scientific studies made in particular fields. For instance, the psychophysics of the act of reading with adults, and the processes involved in its acquisition by children, have been made a subject of extensive researches which are fraught with weighty economic lessons for the school teacher. School geography has hardly yet made contact with the scientific geography of academic circles. For number work, the summarization of various memoirs and the harmonization of different partial standpoints is greatly needed. The high school teachers of history, despite their associations with university men, have never been made acquainted with the goal and methods of the great historiographers, with their different standpoints, schools, aims and methods. Nature study has undergone a radical transformation. Writing has been experimented on, but by those whose dominant interest was in the psychological laboratory, not in the schoolroom. We are greatly in need, therefore, of brief monographic treatments of each of the school subjects by authors capable of compiling practical results from various fields and languages, and all need to be brought between two covers for the benefit of teachers.

Let me now pass to a different aspect of this department. As it lies in my mind I should divide it into about six different fields, each of which ought to be represented, and, indeed, in some great ideal institution would be represented, by a professor who gave his entire time to it, for the field is large. You may say, therefore, if you please, that I am trying to describe an ideal academic department of pedagogy such as nowhere yet exists. In this I would have

I. The history of education treated broadly as I have above suggested, in a way that would put Quick, Gill, Compayré, Schmidt and the rest to shame, because of its scope. It ought to comprise an account of all the great endeavors of mankind to facilitate the impartation of knowledge and of virtue from higher to lower intellectual levels. It should have range enough to include all the great agencies from the kindergarten to the learned academy, to recent correspondence schools and industrial work, to the agencies by which religious and classical culture were imparted in the preceding centuries. It ought especially to have pregnant, meaty chapters on education in China, among the ancient Hebrews, in India, and be strong in ancient Greece and Rome; to teach something on the great work of the rabbis in the middle ages and I would have a careful chapter on primitive education as illustrated in savage races, past and present, a theme full of suggestiveness. The work I

have in mind should be pretty well purged of the lumber of learning, should not deal much with critical questions, but should, above all, be edifying. This, I do think is not so ideal as to be impossible. On the contrary, a well trained young man who would work under competent direction and with the aids now available could, I believe, in two or three years, very nearly attain the goal I have in mind.

II. We need a didactics composed of one chapter for each of the leading topics taught in institutions of all grades. It need not be as freighted with literature or with details as Diesterweg, who is essentially superseded, but should include the utilization of the special researches above referred to; should also briefly discuss the educational value of each topic. We should be told something of what astronomy can do for the high school and the college pupil respectively, and how to secure the best results with reference and criticism to the best few topics only. So of the teaching of botany. We have a copious literature on plant names and plant lore as found among children. What, if any, is the pedagogical utilization of this new material? Much, too, has been written about feelings toward plants, flowers and trees. How should this be correlated with the utility cult so ably represented by my colleague, Professor Hodge? So of anthropology; has it not some place between geography in the lower grades and the university? What of the efforts within recent years to teach evolution in the schools without mentioning the name; that is, of having a text that should briefly résumé the development history of the world as known, avoiding disputed questions and undue interest on missing links, etc. So of the three R's, mathematics, geology, chemistry. Each of these needs to be treated in a broad cultural way, far above the range of the petty pedagogy made up of theories and definitions and abstractions which give the conceit of knowledge while taking away its substance. It need hardly be said that the various types of agricultural and other industrial occupations should be described in detail as actually installed not only in this country but elsewhere.

III. Organization. Here should be treated the construction of school boards according to existing and ideal methods, and everything comparatively in different lands. The pupil should be familiar with devices "made in Germany and France," the financial administration of schools in detail, school discipline, punishments, the training, tenure of office, position, teacher, functions of superintendents, supervisors, inspectors, of teachers' associations, meetings, the agencies for their further self-education.

IV. School hygiene. Perhaps the greatest word in all the vocabulary of education is health in its etymological sense of

wholeness, holiness, completeness. But now we have so much done in this field that it may be said to have pervaded almost everything. The school doctor and his functions, school diseases, their prevention and obviation, tests for the senses, school lunches, dietaries, programmes, lighting, heating, ventilation, form, structure and place of school buildings and their care, clothing, regimen, etc.;—all these are included; but far beyond them, school hygiene has invaded the domain of method, and not only seeks to determine hours and programmes, length of lesson, but how each topic can be most economically taught, that is, with least strain upon the eyes, ears, memory, attention, etc. The great enemy of the school is fatigue, which sometimes slows down activities to one-fourth their pristine freshness in the morning. How to avoid this and to have the work of the school done when the mind has its sharpest edge is the desideratum. Thus we can even speak of the hygiene of teaching reading, writing, the multiplication table, etc. We have two excellent manuals in English, but even these are utterly inadequate to represent the immense work that has been done in this field, all within very recent years.

V. Genetic psychology has surely justified a place for itself in the field of pedagogy. The Hegel and Herbart cults, which have flourished in this country, and are now declining, did great good. They were a Vorfrucht that broke up the ground and made it plastic and friable, but all the old philosophies had very much irrelevant matter. Now we know some things concerning infancy, childhood, and adolescence which are of immediate and pressing importance, although we must not fail to admit and recognize that there is another great group of questions that are uncertain, and still a third as yet unknown and perhaps insoluble. We have learned how the senses develop, something about primitive forms of association, a wealth of concrete facts about fear, anger, pity, sympathy, emulation, nervousness, attention, memory and will. Certain nascent periods are established. Child study develops a new interest in the object of education, whereas we have chiefly cared for the material of instruction and methods. It tends to develop the parental attitude, especially the instincts of motherhood inherent in every woman, and women are coming to do the work of our schools. It shows us that buildings, methods, subjects, everything, are only means to the end of maturing the child. It has convicted us of many vicious practices, confirmed us in some of which we were uncertain, and moreover it is slowly developing a methodology of its own that has some educational value for teachers, and in my enthusiastic belief it has in it more promise and potency of making the work of teaching professional and scientific than all other agencies combined. It has taught

us to utilize the play instinct and the value of different plays, the importance of suggestion and imitation and the psychic significance of many problems. I believe its ultimate goal can already be dimly discerned, and that when it is finished it will reveal the fact that everything in education should be primarily moral, that there is no other standard or ultimate criterion of value, that the purpose of the history teacher is to make the children better by good examples, the object of myth and story is to preform their moral choices, of art to give them exalted moral ideals and save them from low ones and of science to teach them how to live. This department, too, puts the school in rapport with all the vital studies of life and mind. I believe it is the goal of all the philosophies of education, the story of which I spoke above in the first "lack," and that they will all ultimately be reduced to the rôle of diverse prophecies of its dispensation.

VI. I must add one higher field not generally recognized, but which I believe essential to a broad and truly philosophical conception of the work of the teacher of education and that is the race pedagogy, or the education of the different ethnic stocks of the world. Civilization is man's domestication of himself. Sometimes he has thriven under it and sometimes aborted. Our civilization may sometime go the way of that of Greece and Rome; and other stocks, as obscure now as were the Germans and English at the Christian era, may wield all the accumulated resources of Christendom. The duties of superior to inferior groups of men in this day, when all of the latter have been included as colonies or in spheres of influence, seems to me an anthropological question which culminates in a pedagogy which is larger and higher than statesmanship itself and should teach it. The ethnologists who have studied the Indian can tell us more how to treat him than all the Lake Mohonk conferences and hence I would have an educational department devoted to the influence of superior to inferior races. I would have it concerned for questions of industrial exploitation, labor, contracts, hygienic rules where they can be enforced. I would have it learn sympathetically the many good things found among these primitive people. I would have it especially seek to develop a higher pedagogy of mission work so that we shall be advanced enough to know that, at a certain grade of development, fetchism, at another Confucianism, at another Buddhism may possibly be best, and that Christianity is the highest and perhaps may be all the better because of good apprenticeship to certain lower stages and forms.

Thus you will see my conception of education is that it is almost as broad as what biology calls environment, and that church, state, literature or culture generally are to be meas-

ured by the ultimate standard of what they do to bring the individuals delivered to us from the womb to the very highest possible maturity they can attain. One thing is certain. If evolution is true, the time will come, as certainly as the sun will rise to-morrow, when it will be the basis of a new harmony, unity and organization of the sciences, and instead of being the Cinderella in their circle it will supply the criterion by which they are all judged, it will grade and evaluate each product of culture. This is certain to come when we fully realize that the paltry thousand million people living on the earth to-day are but a petty handful compared to the vast cloud of witnesses that are to rise in the unfathomable future of the race, and that the supreme test of all that we are and do is measured by its service to the countless multitude who are to come after us and who are more worthy than anything else of our supreme regard and service.

LEARNED SOCIETIES AND ACADEMIES IN EARLY TIMES.[1]

By Edward Conradi, Ph. D.,
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Introduction.

"The history of Italian academies, written not according to their exterior but according to their secret tendencies, would not only be an interesting chapter in culture history, but would open deep vistas into the political conditions of the people and the country." These words of Reumont, written in 1857, would suffer neither in truth nor in force if they included other than Italian academies, and it can only be regretted that Reumont's suggestion and example did not bring forth earlier results.

The history of learned societies has not yet been written and it is not here the intention to perform that task. It is rather the aim, (1) to give, as far as possible, an outline sketch of the development of such societies from early times with special emphasis on the period covering the Renaissance and the Reformation, and (2) to suggest the influence they have had on the development of thought with special reference to educational movements. Very little has been done in this field in English. The Germans with their keen historical sense, have made a beginning, but only a beginning. To what extent a continuous history can be written the future only can tell. From 529 A. D., when Justinian suppressed the Platonic academies, for about eight centuries little or nothing is known of their existence. Whether during this period there were any societies of learning is not yet definitely known, and may never be known, since their very existence depended upon the thoroughness of the secrecy they were able to maintain. Further research in this field, however, may bring forth valuable results. From the time of Plato till 529 A. D., and from the time

[1] This study was nearly completed while the writer was an honorary fellow in Clark University, and he takes pleasure in acknowledging his great indebtedness to Dr. Wm. H. Burnham for suggesting the study and for valuable suggestions and references to literature; to Pres. G. Stanley Hall for suggestions and criticisms and for the use of his private library; and to Dr. L. N. Wilson for invaluable aid in securing rare books.

of the Renaissance till the present time—though much remains dark—the history of academies is better known and forms a valuable part of the culture history of those periods. Our histories of education, however, ignore the subject almost completely.

It is strange that the history of learned societies, especially of that period covering the dark ages, has not been studied earlier with great thoroughness. For it is now known that during the 15th, 16th, and 17th centuries these societies, usually secret, were the places where the pioneers of free thought and of science, such as Galileo, Bruno, Andreae, Comenius, Leibniz and a host of others could work out and exchange their views unmolested; and it may have been such societies which determined to a large extent the time of the Renaissance, and which, even while under the ban, may have carried through the dark ages the lamp of learning at which Dante and Petrarch lit their torch—Dante and Petrarch, "the two great pillars which encase the door through which we enter the great revival of learning."

As to the question when did learned societies begin to exist, very little definite can be said. One might almost as well ask when did man begin to think? Schleiermacher thinks that in the very need of science there is the need of the scientific society. He says the very impulse toward knowledge leads necessarily to communication and community of all sorts, and that the public institutions which this requires arise absolutely voluntarily and need the state only in their further development, but only to be protected and favored by it.

Early Greek, Egyptian and Arabian Academies.

The Greek Academies. The word "academy" immediately reminds one of Plato, and the name undoubtedly comes from the school which he founded. It is well known that this academy existed for hundreds of years, and when we, after the dark ages, again meet the name in Italy it refers to associations of scholars who devoted themselves chiefly to the study of Plato, and who in their aims and in their forms had a surprising similarity with the aims and forms of the Platonic as well as the Neo-Platonic academies. However, such associations of scholars were known in Greece before the time of Plato.

Philosophers are now convinced that early Greek philosophy developed in religious schools similar to those of Plato and Aristotle. Diels says it seems to him certain that Thales stood in the midst of a circle of eminent pupils who wanted to make practical and scientific use of mathematico-natural science. Though Thales left no writings he was known to, and attacked by, later thinkers, and according to ancient tradition this school

had a direct succession from Thales to Anaximenes (about 600-500 B. C.).

That the Pythagorean and the Eleatic schools had a close organization is well known, and Diels says that it is certain that the strict organization of these schools has influenced their great achievements just as the *common* work of the academy has influenced the Platonic-Aristotelian system.

A very dense veil shrouds the atomistic school. Not only is tradition as to this important school meagre, but its valuable literature has been destroyed almost to the last line. However, the writings of Leucippus, the founder of materialism, have so much similarity with those of Democritus that they might be fused with them, a similarity which points to a close contact as it is possible only in a well organized school. Moreover, Democritus was a man who, according to Aristotle, had thought about everything. The catalogue of his writings as well as the few fragments of his works which have been preserved show that he was active in all the domains of knowledge: Cosmology, Anthropology, Psychology, Logic, Mathematics, Astronomy, Poetry, Grammar, Ethics, etc. The field of activity is indeed so wide that we must assume that some of these writings are spurious or that there was a masterful organization which collected this wealth of material and worked it over scientifically. This encyclopedia gave a model for Aristotle's all comprehensive work which he could carry out only with the faithful co-operation of his friends and pupils.

Diels says of this school: "Soon after the time of Alexander this beautiful structure was a ruin. Only a few pillars have, without severe mutilation, been built into the Garden-house of Epicurus. But this scanty remnant of that former glory, as it is manifested by the letters of Epicurus which were dug up by Pierre Gassendi, has given the foundation upon which the magnificent structure of modern science has been erected."

Information about the inner organization of these schools is very meagre, and, since knowledge as to the subjects and methods of instruction is scarce even in regard to the Platonic and the Aristotelian schools, we can scarcely hope that tradition will give us further light as to the older schools. That the Peripatetic, the Stoic, the Epicurean, and the Platonic philosophies were handed down by organized schools, is well known and yet we know little of the inner workings of even the Platonic and Aristotelian schools. Plato founded the academy and provided it not only with a meeting place but with sufficient revenue for its support. The estate he bequeathed to the muses, and therefore, when in 529 the Greek gods were dethroned by Justinian, the property reverted to the state. The work of the

academy was directed by a leader who was elected by a majority vote of the members. Not only was philosophy studied, but zoölogy, botany, geography, mathematics, and astronomy, were cultivated.

Like the academy, the Peripatetics also had a garden and halls, but in addition had some residences for the members to live in. Wilamowitz says the real estate and mostly the slaves, house furnishings and books belonged to the leader and he transferred the real estate by will to his successors. In case more than one heir was designated, they elected from their midst the leader. Though by this election the other members gave up all claim to leadership, yet in such case the school was divided into two groups, *members* and *pupils*. The pupils could participate in the cult, feastmeals, use of books, etc., and could attend lectures, but they could fill only the lower offices of the school.

There was no revenue producing capital. The pupils paid certain monthly dues, the members not. The financial affairs were attended to by the leader whose private accounts were not separated from that of the school.

Besides a leader the school had a number of minor officers such as the monthly Headship, a Supervisor of Sacred Rites, and a Curator for the worship of the Muses. The customary monthly Headship supervised the conduct of the members and collected nine obols from each member to provide for the monthly feast.

Never, in the history of the world, has the sublimity of striving after scientific truth been felt more deeply and more keenly than with the Platonists and the early Greek thinkers. It was the true religion for them. Science presents to them "the question of life and death before which everything earthly to which one may attach his love must vanish." Aristotle says, only that soul can raise itself to the "ethereal habitations of the gods" who has reached by true scientific endeavor the highest goal of man. Usener says that, excepting medicine, mathematics, astronomy, mechanics, and grammer, the achievements of Plato and Aristotle and their immediate pupils in the domains of mental and natural science stood unequalled till recent and partly till quite recent times.

The influence of these achievements on later thought is so well known that it needs no furthur mention here; the important thing for us to note here is that these giant attainments must be ascribed to academies rather than to schools as we understand the term. Usener says it is wrong to consider these schools (Plato's and Aristotle's) as a number of pupils flocking around a master. They were organizations for research as well as for learning and listening. Their membership included

the whole series from the youth first approaching scientific studies to the independent investigator. And Zeller says: These Greek schools were not only unions of teachers and pupils, but they were at the same time organizations of scientists. They had the character both of a school and an academy. The organization had a leader who directed the work but it occasionally happened that some of the older men who remained in the society after their student years surpassed the leader in scientific attainment and in fame.

It may, indeed, not be far amiss to say that the greatest progress in the extension of human knowledge has been made by those seekers after — often martyrs for — truth, who scorn the restrictions of sect or school and who recognize no criterion but truth itself. Those great universities of to-day who set the milestones in the domain of science can do so only because they offer a free field of activity for the best scholars of their time — because they are built on the fundamental principle of all academies, "Freie Forschung und Freie Lehre," the very principle which has made them, and will ever make them, the leaders of thought.

The Alexandrian Academy. The battle of Chaeronea, which doomed the freedom of the Greek states, also gave the deathblow to free and independent thinking in Greece. About the same time the Ptolemies in Egypt saw that to save their own sovereignty they had to contrapose the culture of the Greeks against the dead wisdom of their native scholars and priests. They founded at Alexandria a great museum and two magnificent libraries and invited scholars to come there to study. Thus it happens that about three centuries before our era, on the banks of the Nile, we find the beginning of probably the greatest academy the world has ever known, making Alexandria the intellectual centre of the world. It was here at Alexandria, according to Baer, in the museum, where for the first time men from all parts of the then civilized world assembled with no other purpose than to extend the domain of human knowledge according to their own desire and inclination, and where the house of the Ptolemies, with lavish hands, furnished the means so that the scholars were not troubled with any cares for the necessaries of life. There were similar intellectual activities at Pergamon, Antioch in Syria, and other places, but all were completely overshadowed by Alexandria.

Baer says that here in Alexandria, where the ideas of the Egyptians, the Greeks, and the Jews clashed, science was born. In Alexandria we find the first physical apparatus and the first physical experiments, and here, by an examination of the human body, a basis was laid for medicine that lasted till the beginning of the 16th century. Here philosophy and history

of literature were born and mathematics was cultivated by Euclid. Here the first attempt was made to measure degrees and the first catalogue of the stars was constructed; also the astronomical system of Ptolemy was developed which prevailed for over a thousand years. Strabo here also collected much of his material for his geography. And, furthermore, how much more of ancient culture would have been lost had not the manuscripts been collected here and multiplied by numberless duplicates by the copyists? Baer says the influence of this academy, which was such not in name but in reality, is immense. He says it is here where science first emerged out of its poetic form, and adds: "We, after two thousand years in this place and at this time, on the banks of the Neva, are under the influence of Alexandrian astronomy."

The intellectual activity at Alexandria extended over nearly 1,000 years. But this very long period falls into two divisions. The first period is characterized by its literary and scientific activity and lasts from about 306 B. C. to about 30 B. C. It was an attempt to continue and develop under new conditions the old Hellenic culture. The second period, from 30 B. C. to 640 A. D., is a period of philosophy and is largely determined by Jewish elements. It was in this period in the early centuries of the Christian era, when Greek philosophy and religion met Oriental philosophy and religion, that Neo-Platonism was born. It was in the early years of the third century that Ammonius Saccas inspired his pupil Plotinus who, in turn, about 244 A. D., founded a school of philosophy in Rome. This school was followed by others. These Neo-Platonic schools, however, were founded especially for the propagation and development of certain doctrines, and do not exactly correspond to what we today would call a learned society, yet they were probably the forerunners of the later Italian Platonic Academies and the carriers of Platonism and that Socratic elenchus which finally broke through the darkness during the middle ages and ushered in the dawn of day. It is important to note that Platonism and Neo-Platonism were, in the words of Harnack, the source from which in the age of the Renaissance and in the following two centuries, empiric science developed in opposition to the rationalistic dogmatism which disregards experience. Magic, astrology, alchemy, subjects which were of the keenest common interest to the later natural philosophers of Europe, and which gave an effective impulse to the observation of nature, and consequently to natural science, were closely connected with Neo-Platonism.

Arabian Academies. During the centuries when Platonism and Neo-Platonism were suppressed and seemingly forgotten in Roman Christendom, it was the Arabians who carried forward

this heritage. The schools founded by Harun-al-Raschid and al Mamun at Bagdad, Kufa, Bassora, Bochara and other places, about the time Charles the Great was gathering the wisest men of his time about his throne, were schools rather than academies, but it is well known that the above named califs made great efforts to get men of learning to their courts. Mamun, for instance, offered a great sum of money and eternal peace to the Greek Emperor Theophilus if he would give for a time the services of the famous mathematician Leo; an offer which the Emperor rejected in order that science might remain a preference of the Greeks. And Baer says that the famous Orientalist Frähn told him that in the 10th century there existed a society in Bassora called *Ichwan-al-safa* (Brothers of Purity) which exactly resembled our academies of to-day. They even published proceedings (Sammlung Abhandlungen) in which are treated philosophical, physical, mathematical, and theological subjects, and which are preserved to the present day. There was so much liberality (Freisinnigkeit) in these proceedings that later an *auto-da-fé* was held over them in Bagdad.

The most famous Arabian academy, however, was that at Cordova in Spain. It was so famous in its time that scholars flocked there from all parts of the then civilized world. They came from France, Germany, Italy, England, Greece, from North Africa, Syria, Arabia, Persia, and even from distant India to study there or to live for science and poetry which were flourishing under Hakem II. This prince even sent representatives to the larger cities of Africa, Egypt, Syria, Arabia and Persia to either buy or copy the best works. In this way he gathered a library variously estimated at from 400,000 to 600,000 manuscripts. The catalogue, according to authentic sources, contained 44 volumes.

There were other schools in Spain, but Cordova was by far the most famous. It was an academy on the Alexandrian type. Hakem II demanded nothing of his protégés but to complete the researches and other works they had begun or had promised, and did everything in his power to secure for them the means and the leisure, and even gave up his palaces to them. Moreover, Aschbach reports a society of 40 scholars and poets who during the winter regularly met at the house of a priest in Toledo for scientific work. This is very much like the beginnings of the later Royal Societies of France and England.

Among the Arabian philosophers, Averroes (died 1198), whose writings were known to the entire cultured Occident, was probably the greatest. His doctrines, which found acceptance among the heretics, were considered heretical by both Moslem and Christian. The literature of the Averroists is mostly destroyed, as is the case with all parties that were persecuted by

the church, but from the attitude of their opponents it seems that they were convinced that the Averroists formed a well organized society. Voigt says: "It seems that the Averroists were a kind of secret society which held together by a secret understanding and pass words (Stichworte), and which, by its ramifications and its position beside the church reminds one of Free Masonry." (Cited by Keller.)

It is important to note that Dante and Petrarch grew up in this atmosphere, and what these two men, especially the former, mean to the world need not be restated here. On March 10th, 1302, Dante was condemned to be burned at the stake, and from that time till his death he was a wanderer in the wide world and not only tasted the bitter and the sweet that always come to the great champions of individuality and of freedom, but lived face to face with the philosophy of his time. With admirable independence he brushed aside the traditions and the language of the church by denying the church the right to use force in matters of religion, and by writing the master creation of his genius in the language of his people, thus demonstrating to the world that Greece and Rome had not exhausted language and showing the possibilities that lie hidden in the vernacular of common folk.

Two years after Dante had gone into exile, Petrarch was born. He was a student of philosophy, and through the study of the Greek language became a warm admirer of Plato. He also was finally accused of being a magician and a heretic and was even suspected of being a leader among the Averroists. In his old age, however, he was converted to the Roman Catholic faith and devoted his last years to defending it. Among the men whom Petrarch especially tried to convert to the faith was Ludovico Marsilio (died 1393). This man was at the head of a society sometimes called *Academia di San Spirito*, to which Coluccio Salutatis and Niccolo Niccolis belonged. It was Niccolis who persuaded the famous Platonist, Manuel Chrysoloras, a pupil of Plethon, to stop for a while at Florence and to thus become the teacher of many men who belonged to this society. This academy is known in history simply as a literary society, yet it had among its members poets, philosophers, scholars and artists. Moreover, it seems that Platonism was dominant here as in later Platonic academies. Here, Keller says, we meet the first traces of the close working together of science and the arts, which has given the real stamp to the great period of the Renaissance.

Italian Academies.

What became of the Platonic academies from the time Justinian suppressed them, in 529 A. D., until they again began to

flourish in Italy about 800 years later, is not known. Keller thinks it is altogether improbable that these academies which had braved all storms and all changes for a thousand years should be destroyed with one stroke. He says that doubtless these experienced men ceased to work in the forbidden forms, but that it would be remarkable if they could not have found secret means to follow their ideals in legally permitted institutions until such a time when the academies could again appear on the surface.

Keller says the word "academy" appears in Italy as early as 1439 in connection with Bessarion's name, but that that is no evidence that no such organizations existed before that time. As we shall see, for instance, the pupils and followers of Plethon formed a kind of society or academy and the church was issuing decrees against similar societies more than 150 years earlier. The history of these Italian academies is difficult to follow because they are secret societies. Their constitutions, their symbolism, their signs, their list of members, their highest religious convictions were withheld from the public. It was at the time often said in Italy that the Platonists live in their academies, "like the Greeks formerly in their Trojan horse." This secrecy, made necessary by the severe persecution of the church, made it almost as difficult for the historian of their time as it is for the later historians to study their history.

That there were societies as early as the 13th century is shown by the decrees of the church councils and of the Roman Curia. The Council at Valence under Innocent IV, in 1248, forbade, under penalty of excommunication, the societies which were held together by oaths and pledges. This seems to have failed to produce the desired effect, and so in 1282 at another council at Avignon even stricter regulations were passed. The council at Avignon of 1327 again emphasized these regulations and specified more in detail the character of these societies. According to this decree there were forbidden societies in the church which had their chief, their feastmeals, mutual pledges of brotherly assistance, signs and symbols, and a society uniform. The fact that these decrees were expressly directed against societies which had existed since ancient times, shows that this is probably an old struggle, that the church was dealing here not with local societies but with a strong and wide spread organization.

Keller is undoubtedly right when he says that the banishment of the Greek gods did not mean the extinction of the fire in the souls of the Platonists. If it be true that they continued their activity in other legal organizations it is probable that they entered the inner circles of labor guilds, since mathematics and geometry, which were of so much importance to some of the

most important trades, were assiduously cultivated by the academies, and since later in the middle ages we find many points of similarity between the academies and labor guilds, whose inner circles were often called *academy*. Furthermore, it is held that Christianity in its early years found its first and strongest foothold among labor guilds, since their idea of brotherhood had much the same in spirit as that represented by the Christians. Ward says that history shows that Christians planted into, and for the first two hundred years derived their sustenance, support, legalization, and economical life from labor unions of the ancient world. He says the word *ecclesia* and *diocese* came into the church through the labor unions, they applied this word to their houses of worship. He says the prechristian trade unions possessed their temples as common property around which were the graveyard, the grove, and many fixtures for meetings, discussions, entertainments and comforts of every kind, and that these temples gradually developed into churches.

We know also the close relationship between Neo-Platonism and Christianity, and that heretical sects in later years often maintained themselves in labor guilds; therefore, at least the possibility exists that Platonic ideas were carried through the dark ages by these guilds. Moreover, considering the pertinacity with which not only the Italian academies maintained themselves during times of persecution, but also how the heretics maintained themselves secretly and yet unitedly even from the early Christian centuries up to the time when intelligent people were permitted to call "heresy" enlightenment, and how easy it was for Platonic ideas to find enthusiastic supporters in Italy and otherwheres, it is not entirely a cry in the dark to say that these academies have had a continuous existence in some form or other from the time of Plato till now.

After the suppression of the Platonic academies, the church riveted its dogma firmer and firmer and freedom of thought seemed to be doomed. The church fought against all heathen philosophy, but finding it necessary to justify its dogma by means of reason, she finally used the Aristotelian logic to accomplish her ends. This scholastic dogmatism degenerated into such dry formalism that no independent spirit could live in its shackles. But how live outside of them so long as the church was with blighting hand withering every sign of verdure it could find outside of its pale? Probably best by replacing one authority by another; by replacing the degenerated church Aristotelianism by the ever living Platonic passion for truth, a passion which has appealed to all great minds in all ages.

Schultze says the great struggle in philosophy for several thousand years has been between Aristotle and Plato; "as one

of these stars sinks below the horizon and the other rises, a new era in philosophy begins." The important thing in this return to Plato, however, was not so much the study of Plato as the emancipation from the authority of Aristotle, and this meant nothing less than the emancipation from the yoke which church scholasticism had placed upon mind; as the spirit threw off the chains of Aristotelianism it ushered in the age of free thought and criticism. There was Platonism in the church, it is true, but only the idealism of Plato; the church took no account of the master's questionings, of that Socratic elenchus which has been and still is at the bottom of all progress in all the domains of human activity.

The Florentine Academy. True Platonism had been in Italy among the early leaders of Renaissance, as we know, but the man who breathed a new life, a new enthusiasm into it, and who thus was probably the father of all later Platonic academies, was Gemisthos Plethon, of Greece. Plethon (1355 - 1450) was a man who had the greatest reputation for his wisdom and his justice. It is said that people, even the wise and the great, came from all corners of the earth to see him. He was a great teacher and had gathered around him a kind of society, a sect of followers, as he himself considered it. Manuel Chrysoloras and the later famous Cardinal Bessarion were among his pupils. Bessarion was his pupil since 1415 and was near him till 1436.

Plethon stood in great favor at the court and for a long time held an appointment as judge. When the great union council was held at Florence in 1438 to bring together the eastern and the western church, Plethon was sent by the emperor as a representative of the east. It is said, however, that he had no interest in the union of the two divisions of the church, but devoted his energies toward expounding his own ideas to the Italian people. Schultze says: "It was not the consultations at the council, but rather the free intercourse with the Romans that roused the activity of Plethon. In those dry sessions he spoke dry words which did not come from his heart; it was in living conversation, that came from the depth of his soul, that he kindled the Italian spirits into such a glow that they lit up, not only Italy, but later the whole of philosophizing Europe." Plethon found in Italy already an enthusiasm for the Greek muses, and especially for Plato in philosophy, and so he was listened to with the same enthusiasm with which he spoke.

Gregorios Monachos, one of his disciples, says: "The best of the Romans were so astonished at the irrefutable proofs of this man that, though they at first tried to refute him and made numerous efforts to do so, they finally gave up all their self-conceit and expressly admitted that they knew nothing."

From him, however, they wished to learn, and in his friendliness he was quite ready to give them his assistance. — Hieronymos, another contemporary, said: "How the Romans were astonished at his wisdom and his virtue and the power of his speech. He shone amongst them more brilliantly than the sun. Some praised him as the common teacher and benefactor of man, others called him Plato[1] and Socrates." Amongst these admirers was the young Pomponius Laetus, later the leader of the Roman academy.

Villari says: "So admirable were his writings that it was difficult for the best philologists to distinguish them from those of the brightest period of Grecian literature." And Giacomo Leopardi, than whom, according to Villari, there can be no better judge, says: "with such abundance and weight of authority, with so much sobriety, power, and elevation of style, purity and refinement of language, that the reader is tempted to pronounce Gemistos, the equal, in all save antiquity, of the great Grecian writers of old. And this was the verdict of the learned of his own land in his own age." (Taken from Villari, Life and Times of Savonarola.)

It was due to the inspiration given by Plethon that Cosmos the Great founded the Florentine academy whose fruitfulness for the study of Plato and so also, not only for philosophy but for all humanistic science, has been of the greatest importance. When Plethon saw that he had kindled a passion for the new ideas in Cosimo, he went a step farther and communicated to him his cherished plan of establishing in Florence a revival of the ancient academy that had won so much glory for Greece. Cosimo was enchanted with the plan, took it up eagerly and set to work to carry it into effect. As soon as Gemistos had left Florence, however, Cosimo saw that the Platonic academy could not possibly flourish without some ruling spirit at its head. Hence he had Ficinus, the son of his physician, educated in Platonic studies, and with so much success that Ficinus translated the works of Plato and of the Neo-Platonists so masterfully that they have been reissued from time to time till the present day. To this great circle of Platonists who considered Ficinus their teacher, Reuchlin, the advance guard of humanism in Germany, belonged. And Reuchlin's teachings in turn were the foundation of Melanchthon's humanism, so that Plethon's influence is present in the German Reformation.

Upon the death of Plethon, Cardinal Bessarion wrote a letter

[1] It was here in Italy that he added Plethon to his name, which was Georgeos Gemistos; Gemistos means *full* and Plethon means *full*. Schultze supposes that he probably adopted *Plethon*, having the same meaning as Gemistos and sounding more like *Plato*. His enemies, at least, took this change of name as a sign of his arrogance.

to the sons, saying: "I have heard that the father and leader has gone to heaven leaving behind all that is earthly, in order that he may dance the mystic dance with the Olympian gods. I am glad that I have had the companionship of a man than whom Greece has produced none wiser since the days of Plato and Aristotle. If one would assume the endless transmigration of souls as taught by Pythagoras and Plato, one could not hesitate to believe that the soul of Plato had come down and chosen the body of Gemistos for its abode. If you do not feel the greatest joy to be descended from this man, you do a great wrong. To bewail such a man is not proper. This man made Hellas famous and will be its ornament in time to come. His memory will not fade; his name and his fame will be handed down to posterity with everlasting praise."

In Italy Plethon's name was not forgotten. In the Florentine Academy Plethon was revered as the prophet of Plato and he was looked up to almost as a new saint.

As to the organization of this Florentine Academy Brandi says it had no statutes and no organization. The members were held together by their own love for learning and by the personal influence of the Medici. They met in the splendid country villas of the neighborhood, mostly in Careggi; they held plain meetings on the blooming meadow or on the mountain top; or they held a great social banquet on the model of the Platonic Symposium. Such a banquet was held regularly on Nov. 7, the birthday and the day of death of Plato.

The Roman Academy. The Roman Academy is one of those of which we know most, and yet we do not know its origin. We know definitely only that Pomponius Laetus was at the head of it for some time. This man, as we have seen, in his youth, had heard Plethon in Florence, and was undoubtedly inspired by his enthusiasm.

Laetus was born in 1428 in Dianium as the son of Prince John Sanseverini. He seems, however, not to have used that name but appeared as Peter of Calabria and later under the humanistic name of Giulio Pomponio Leto. A family quarrel caused him to leave home, and giving up all claim to his descent, he went out into the world to make a career for himself. He first went to Sicily, probably because he had friends there; later he came to Rome to be near Laurentius Valla, for during the reign of Pope Nicholas V (1447-1455), and under the influence of Cardinal Bessarion great liberty was enjoyed by the humanists in that city. Keller thinks that we may safely assume that the academy already existed at this time. For reasons unknown, Laetus crossed the Alps and went into the valley of the Danube, from whence he went to Bohemia and to Poland. Then he turned and went to Greece returning to Italy by way

of the Ægean Islands. He settled in Rome, purchased a home of his own in which he organized a museum, and we soon find him at the head of the Roman Academy.

The descriptions of this, as of other academies, vary according to the sources from which they come. The church, quite naturally condemns them severely, whereas more impartial historians take a quite different view. Pope Paul II said of the Roman Academy in substance: "They deny the existence of God. They declare that there is no other world than this, that the soul dies with the body, and that accordingly, man may give himself up to the indulgence of his passions without any regard to the law of God; all that is needed is to avoid coming into collision with the temporal power. They despise the commands of the church, eat meat on fast days and revile the Pope and the clergy. They say that the priests are the enemies of the laity, that they have invented fasting and forbidden men to have more than one wife. Moses, they teach, deceived the Jews, his law is a forgery; Christ was a deceiver, Mahomet a great intellect but also an impostor. They circulated predictions of the speedy death of the Pope when a new election would bring about a complete change in the state of affairs.

Most of what we know of this academy comes from the popes, who were hostile to it. The best representatives of these academies emphatically call themselves Christians, though orthodox theologians again and again call them heathens and atheists. Impartial modern historians do not take these charges very seriously; they realize that, though most flocks have their black sheep, the leaders of these academies were usually men of high ideals.

In 1468, however, Paul II accused members of the Roman Academy of heresy and ordered Laetus and about 20 "poets" and "philosophers" arrested. Many of the members were absent, some were arrested and tortured so severely that it is said many of them died. Laetus was in Venice at the time. Here he lived three years in retirement. But when the Pope asked for his extradition, Venice yielded and he was led to Rome and in chains he had to parade the streets. In about a year all were given their freedom, the academy was dissolved and all threatened with punishment as heretics if they would violate this decre. The trial, however, threatened to develop a great sensation, because the academy had powerful friends. Cardinal Bessarion, for instance, when the trial was in progress (1469) issued a pamphlet defending Platonism, and opened his house to students and lovers of Plato, not only of Italy but of other countries as well. Neighboring countries became mixed up in the affair. King Ferdinand of Naples was a protector of academies and they had powerful friends north of the Alps; in

short, their connections were such that even Paul II had to draw in sail and give the prisoners their freedom.

After the Roman Academy had been dissolved we hear nothing of it. The members kept absolute silence, contemporaries say nothing except record the common gossip of the day, and we should suppose that this academy ceased to exist after the persecution. However, in 1852, DeRossi found the name of Pomponius Laetus and others written on the walls of the catacombs. Many of the names are unknown and have thus far not been solved. Pastor, who represents the Catholic view, says, since these "modern heathens ventured into the venerable vaults of the catacombs where the very stones preach the gospel, to scrawl flippant inscriptions on the walls," we cannot wonder that contemporaries called them heathens rather than Christians. Keller, who represents the opposite view, says: "It is not too far fetched to believe that in these subterranean temples, filled with hallowed memories, these faithful servants of truth in secret kept burning that torch of progress which the powers that were so often tried to befog or destroy.

When, in 1471, Sixtus IV came to the throne he followed the opposite course of Paul. He recognized the academy. Their meetings were open; bishops and priests belonged and they obtained many valuable privileges. It was supposed that with the establishment of privileged academies the free academies would cease. The former, however, had not only literary men as members, but their membership included kings, princes and nobles, scholars, poets, builders, sculptors, masons, and even men without qualifications. That such a society is not the means for men of high scientific ideals to accomplish their aims seems natural. So it came that beside the public academy there continued to exist the free and secret academy. Laetus remained at the head of both till his death when he was followed by the poet Angelo Coluzzi seemingly as head of both academies. It is difficult to follow the history of the academies, but certain it is that in the middle of the 16th century Pope Paul III (died 1549) looked upon certain academies as hotbeds of the Reformation. And it is known that the Inquisition held that the pamphlet "Sommario della Sacra Scrittura" (The Sum of Holy Writ) which was widely circulated over Italy in 1535 and was one of the most famous of all reformation pamphlets, had originated from the academies; and the pamphlet actually found some defenders in the academy of the Grillenzoni, in Modena, in 1537.

The influence of the Roman Academy was very great, not only in Italy but also on the other side of the Alps as we shall see presently. Barthold says that at all seats of learning such societies were formed, modelled after the Roman Academy; that

nearly every palace was changed into an academy of science and a temple of the Muses, especially in Mantua and Milan; that all these academies at one time or another, besides classical antiquity, gave attention to the mother-tongue; that Florence, Venice and Bologna rivalled in the cultivation of "belles lettres." This last is especially significant in connection with the German "Sprachgesellaschaften," to be treated later. The number of Italian academies, both scientific and literary, is variously estimated at from a few hundred to 700. In some of them experimental science was cultivated: such were the *Academia Sacretorum Naturae*, founded in Naples in 1560 under the presidency of Baptista Porta; *The Lincei* in Rome by Federigo Cesi which issued valuable publications and of which Porta, Galileo and Colonna were members; and *Academia del Cimento* founded in Florence in 1657 under the advice of Viviani, one of the greatest geometers of Europe, and of which Toricelli, the inventor of the barometer, was a member.

The Neapolitan Academy. Another famous academy is the one at Naples under Alfonso I, next to the three Medici the most noteworthy person of the Renaissance. He collected around him a number of scholars and devoted large sums of money to science; it is said that he spent 20,000 ducats annually for this purpose. The most famous of this group of scholars was Antonio Beccadelli, or sometimes called *Palermo Antonius Panormita* (born 1394 or 95), who first made humanism at home in Naples. He had met the most famous humanists at the court of Florence, such as Poggio, Niccoli, Cosmos de Medici, Leon Battista Alberti, and he took great pains always to keep up good relations with the Florentine circle. He was at the head of the Neapolitan Academy and Alfonso furnished him lavishly. He presented him with the magnificent palace Zisa with its orange gardens and fields; a villa in Portici; a palace in Naples; and when he went to a princely wedding at Venice he went with twenty servants and received 850 ducats for his expenses.

Gothein says, his academy, in which he preferred to inspire rather than work himself, was held together not by its relations to the royal house, not by a kind of public recognition, not even by the intellectual problems which it had set itself, but rather by a personal friendship the intensity of which was increased by the feeling that they were a society of a higher culture in an essentially different world. Though Panormita had made it a law of the academy that a grammatical essay had to be read at every session, the grammarians, who were the teachers of the young, were the enemies of the academy. One can readily understand this when one remembers that it was not "Gelehrsamkeit" that was carried on by this group of scholars,

but above all "die Wiederbelebung des antiken Lebensinhalts" as Gothein puts it. Personal friendship was a more important bond of union than common studies. As with the Florentine Academy and the Roman Academy under Pope Leo X, the fusion of friendly sociability with literary debate was a necessary of life.

Valla was for a time a member of this circle. Luther was a student of Valla's works. Gothein says, it was Valla who gave Luther the conviction that the claims of the Papal power rested on a fictitious basis, that the real basis of the church cannot hold its own against criticism.

The Crusca. One of the most famous academies of Italy, and one which has had a greater direct influence on the development of similar societies north of the Alps, and one of whose history we know more than of any other, is the *Accademia della Crusca.* It was founded at Florence, in 1582, by Cosmos de Medici by giving an official form to a private academy which already existed. Its original membership was five, but the same year a sixth member joined named Lionardo Salviati; it is he who drew up the plan for an Italian dictionary, a work, Reumont says, which alone would have made him famous. Though its members were mostly Tuscans, yet it had foreign members, and during the 17th century a great number of the most brilliant men of Italy belonged to the society, and Reumont says, its activity corresponded to the brilliancy of the names which adorned it. As early as 1586 Virginio Orsini, Duke of Bracciano, the most brilliant nobleman of Italy, was a member. Reumont says in the 264 years of its existence it had 976 members, native and foreign. Each member had an academy name, a "Sinnspruch," and a "Sinnbild." Many of the nobility that belonged supplied the academy with funds. The house of the Medici stood by the academy for 200 years and sixteen of the princes or this house were members. Amongst its membership were one Pope, Clemens XII, and many cardinals. From the time of its beginning till 1857, seventy foreigners belonged, as follows: Thirty-eight French, sixteen German, six English, four Scandinavian, two Polish, two Dutch, one Greek and one Spanish. Many foreigners were admitted complimentary, but in most cases the appointment was due to service rendered to science and to literature. Some foreigners had the twofold distinction of representing their government at the Tuscan court and of being a member of the Crusca.

The aim of the academy was to purify the mother-tongue, or, as its name indicates, to separate the flour from the bran. In thus establishing a literary language and in limiting the dialects to their proper spheres it did a great thing, such as,

Reumont says, is rarely attempted and still more rarely prosecuted with equal skill and equal success. To attain their end they thought it best to work out a dictionary, and so we find as early as March 6, 1591, the plan of a dictionary discussed. Not before the spring of 1597, however, were definite rules adopted as to the plan as a whole, definitions, etymology, orthography, arrangement of the subject matter, the citing of modern authorities, etc. Four members were given the direction of the whole work, but it was soon found that the task was entirely too much for them and fifteen more were added, making the number nineteen.

That these nineteen men lost no time in getting to work is shown by the fact that in May, 1606, the first revision of the dictionary was completed; that in October, 1610, the secretary of the academy, Bastiano de Rossi, was instructed to arrange for the printing of the complete work in Venice; and that in 1612 the *Vocabolario degli Accademici della Crusca* appeared in a folio volume. Just thirty years had elapsed since the founding of the academy. Eleven years later a second edition was issued with some additions and corrections, and forty years later, 1681, the third edition appeared in three folio volumes. In this edition the range of authors cited and compared was widened and etymology received more extensive attention.

The Crusca also issued a corrected edition of the Divine Comedy in 1595. They felt the need of this because it contained the better part of the language and had been ruined by commentators. They took as a basis the Aldine text of 1502, but compared it with various other manuscripts and added other versions in the margin. This edition became the model for the majority of the later editions.

The greatest work which the academy carried out in the first half of the 18th century, and, Reumont says, the greatest work of its kind which any learned society has ever carried out, is the fourth edition of the dictionary, which appeared 1729-1738 in six folio volumes. Reumont says that up to the present time this fourth edition has been the basis of all lexical work in Italy. It was reprinted with more or less changes and additions in Venice in 1741 and 1763, in Naples in 1746, in Verona in 1806, and in Florence in 1833. It has met with much criticism, but the academy's service to the language, Reumont says, even envy and prejudice cannot deny.

The foreign members, it is true, could not help much toward a dictionary, but they, each in his way, spread the knowledge of, as well as appreciation for, the Italian literature by means of translations or annotated editions of the great Italian masterpieces. Not only that: these foreigners, above all, carried across the Alps that spirit of brotherhood, and that passion for

co-operative investigation of truth outside of the narrow bounds of scholasticism, which was destined to yield such fruitful results in future years. Among its foreign members were not only poets and literary men, but princes and philosophers, historians, archæologists and natural scientists.

Furthermore, this academy became the model directly of at least two other famous societies, of the Old French Academy, in 1635, and of the "Fruchtbringende Gesellschaft," founded by Ludwig von Anhalt in 1617, both of which societies gave their attention largely toward the development and purification of the mother tongue.

Academies North of the Alps.

Academies of Conrad Celtis. The academies of Italy, however, made themselves felt in northern Europe long before the "Fruchtbringende Gesellschaft" was formed. Numerous European scholars in travelling through Italy became acquainted with, and often became members of, the academies. Among these wandering scholars, and one of the most famous of them, was Konrad Meissel, or, as he later called himself, *Conrad Celtis Protucuis*, who was a poet of some note, being crowned by Emperor Frederic III in 1487.

Celtis (1459-1508) had a great desire for knowledge. He fled from home and went to Cologne to study, but soon tired of scholasticism there, he travelled far and wide, and in 1484 came to Heidelberg. This was at the time a great seat of humanism and here he matriculated under the academic name of *Conrad Celtis Protucuis*. He soon so won the respect and love of Dalberg, Agricola, and Plennigen that they admitted him to their "Zwanglose Gesellschaft," a society modelled after the Roman Academy. After he had visited Erfurt, Rostock, and Leipzig, he went to Italy in 1486 and heard at Padua, Ferrara, Bologna, Florence, and Rome the most celebrated humanists. Having sat at the feet of Pomponius Laetus, and having been urged by him to found similar societies in Germany, he returned by way of Venice and founded in Germany academies for classical studies, modelled after the Italian. It is said that he founded eight or nine such academies in different parts of Germany of which the one at Vienna and the one on the Rhine were the most noted. Some of his academies, it is true, may hardly have outlived the presence of the poet, yet with some the influence of classical antiquity remained longer.

The great *Sodalitas Rhenana* or *Celtica* was founded between 1487 and 1491; it was a humanistic society which united the noblest minds in the valley of the Rhine. Little is known of the constitution of this society, but it is known that it had one law, namely, that all manuscripts published by the society

were to be examined by the members. This society had a letter of protection from the emperor copyrighting its publications, and it regarded itself as a kind of overseer over all the other societies of the life of which we know little.

The society at Vienna was quite comprehensive and successful. It was the centre of humanism in the valley of the Danube, for Germans, Bohemians, and Moravians. Here classical forms of poetry were successfully imitated. The members presented each other with loving cups accompanied by odes full of inexhaustible praise for genius. Every work of the muses here, however, was in antique form; the very universality of the society prevented it from doing anything for the vernacular. One of the plays of Celtis, entitled *Ludus Dianae*, was played before the emperor at Linz by twenty members, four of whom were crowned with laurel, and all members present were served from golden vessels.

The society of Wittenberg was the one where the celebrated Bohemian Bohnslav Lobkowitz von Hassenstein "had his love for the humanities aroused which he carried with such beautiful success to his countrymen."

When Conrad Celtis, "burned out by the fire of his soul and his senses," died Feb. 3, 1508, at Vienna, at the age of 49, the academies continued to live for several years, but they soon disappeared in the storms of the reformation. These old academies, however, had not lived in vain in so far as they "strove against hide bound scholasticism in church and school and made it possible that the Latin Muse could, in the 16th century, be represented by the gifted Hessian, Coban."

Barthold says, that though antiquity was the centre around which these societies moved, and though they held close to the purity and elegance of classical models, yet they drew into their circle not only Florentine Platonism but also mathematics, astronomy (astrology), and music. He says this academy investigated the remains of Roman antiquity in Germany and studied inscriptions and monuments and thus opened the way for German history and its sources. Celtis rendered great service to history by finding the so-called *Tabula Peutingeriana* and by discovering in an unnamed Benedictine cloister the handwriting of Hrosvita, the oldest German poetess, which he published in 1501. Keller says that though these societies devoted themselves to poetry, to the publication of ancient classics, and to the cultivation of the vernacular, even calling themselves poets, yet it needs be noted that some of the members were not poets and that there were very few poets who did not at the same time devote themselves to astrology, cosmography, geography, alchemy, etc., and that among these "poets" we find prominent tradesmen such as printers, paint-

ers, sculptors and others. Moreover, just as Paul II felt that there was a connection between the Roman Academy and the Bohemian heretics, so the German clergy accused these "poets" of heresy.

These academies did really nothing for the mother tongue though they translated many classics and meant to give the vernacular the same flexibility and richness they so much admired in the ancient languages. To bring about a regeneration of the German language by means of classical models failed. Barthold says German poetry became silent with the death of the Frankish warrior of freedom, Ulrich von Hutten, who was crowned at Augsburg in 1517. The succession of Charles V to the German throne was a national calamity. Luther, it is true, secured the dominance of German in the Protestant church, in popular expression and in church poetry, but scientific German did not profit thereby and the poetic genius of the people was threatened with extinction during the fierce battles for freedom of conscience. At the time when the Italian Muse, cultivated by numberless societies of linguists and poets, reached its apex with Tasso, in Germany the period of barbarism in language set in. And during this very period of darkness in German history and German language, the "Fruchtbringende Gesellschaft" was born; to this society we shall give our attention in a later chapter.

The Bohemian Brothers. Humanism, however, was carried on not only in secular academies but also by religious organizations, such as the Bohemian Brothers and Waldensians. These were of course sects, "heretics," which stood outside of the Catholic church and were severely persecuted by it. They were probably the representatives of that independent spirit which refused to bend the neck to the yoke which the Catholic church ever since the early Christian centuries tried to force upon all religions within the bounds of the Roman Empire.

J. von Döllinger holds that the sects of the middle ages are connected by a series of members with the sects of the first and second Christian centuries, and believes that at the beginning of this series of development are those sects which are commonly called *gnostic.* He says gnosticism had spread all over the Roman Empire, and even beyond its boundaries, in the middle of the second century.

Keller says that the inner relations of all the sects, from the early centuries to the middle ages, is so striking that one can only explain them by assuming a common origin of them all. He thinks that the most important doctrines of these sects began their development with the early church fathers, and from the east gradually spread northwestward over Asia Minor, Bulgaria, Dalmatia, Upper Italy, Southern France, thence to Ger-

many, Bohemia, Poland and England. During all these centuries their convictions had to maintain themselves against persecution, and that often of the severest kind. It was common during those times for men to have two religions, the one public—per force, the other the one they believed and which they practiced in private. This is an important fact to bear in mind when one studies the organization of these "heretical" churches.

These old evangelical churches had three degrees:—*Socii*, *Fratres* and *Perfecti*. It was the *Perfecti* who elected the brethren and who supervised the whole temple. The Fratres formed a kind of an academy. Keller thinks that undoubtedly many churches consisted of only Socii who did not know that they formed a part of a ring of "heretics." Often these churches, especially when religious storms were raging, existed only as literary societies, or as inner circles of legalized organizations such as trade guilds, building corporations, laboratories of princes, and printing offices. In this way they could follow their own ideals unmolested. Thus we find not only a close relation between the Bohemian Brothers and the academies, but in many cases in Bohemia they were one and the same thing. What this means to education we shall see later when we note the relation of Comenius to the academies.

Among the Bohemian Brothers, in the 15th to the 17th centuries, there were many so-called literary societies which had to withdraw into secrecy during periods of religious storms. The membership was composed of men of all classes and all professions, often they even had members of all confessions. Some of these societies had their own houses in which they had their own libraries, their own entertainment rooms and sometimes their own school. Like the Italian academies, they cultivated music and poetry, mathematics and natural science, as well as the vernacular. They aimed also to enhance the glory of God, virtue and good morals, and to foster and disseminate peace and good will among mankind.

Though we know nothing of their rules and regulations, we do know that in the history of Bohemian and Moravian humanism these societies played a great rôle. Barthold says in substance: "No slavic race had had such a golden period of spiritual culture, of wealth and of splendors as the Bohemians had from the time the Hussite storms had subsided till the time of the second Rudolph. Bohemians were among the rivals that competed for the prizes in Celtis' academy; some of them ranked among the best, especially was this true of Nicholaus Troylo, professor at Prague, who in 1627 became a member of the 'Fruchtbringende Gesellschaft.' Printing flourished among them, and we find the most select libraries in Bo-

hemian cities in the palaces of the cultured rich. In the 16th century, while Germany was still Latin, the Bohemians began to write their own history in their mother tongue, and though the Catholic clergy held to Latin, the nobles of both confessions promulgated national works in the Czech tongue."

After the defeat of the Bohemians all this changed; the Protestants were driven out of the country, and even the Catholics who had belonged to these societies were placed under close surveillance. The societies were by force changed to church fraternities, and in place of the "senior" a priest was placed at the head. In their houses church services were held and masses were read, and the members had to participate in the choirs at processions and church festivals. During the very time in which these literary societies were destroyed in Bohemia and Moravia we meet for the first time the activity of the "poets" and their "Sprachgesellschaften" in the Empire and especially so in Silesia. Martin Opitz, the personal friend of Comenius, was their spritual leader and he and his friends made the dialect of their province the leading idiom of the age.

It is significant here to note the relations of the Bohemian Brothers and the other old evangelical churches to the orient and to the Greek church on the one hand, and to the guilds and the academies of natural philosophers and alchemists (to be treated in a later chapter) on the other. This complex interrelationship may be the means by which we may finally bridge the chasm between the sixth and the 15th century.

Academies and Labor Guilds. From early Christian—may be from prechristian—times the labor organizations have been among the carriers and disseminators of science and liberal ideas. It is probable that as early as the time of the Pharaohs the technical knowledge of masonry and architecture was cultivated by the guilds and that the same is true of the weavers, just as the inner circles of guilds during the middle ages carried forward the "secrets" of their trade, one of which was geometry. It was in these inner circles—often called academy—that the master workmen were educated. Moreover, wherever the guilds flourished, the academies flourished also, and, Keller says, the words "Zunft" and "Hansa" (guild) were often used to also designate the academies, and that many of the members of the academies of natural philosophers were the sons of guild-brothers, all of which points to a close relationship between the two organizations. He furthermore says: "It is a noteworthy phenomena that all the great artists who carried forward the spiritual heritage of Dante and Petrarch grew up in the soil of the trades and that they found and recognized not only their social but also their spiritual home in the academies which in their turn rested upon the guilds. The

great ideas of antiquity, and especially the philosophy of Plato and the religious convictions of early Christianity formed the spiritual bond which united these trades and their academies into a long chain; and it was the ideas, convictions, and principles of these academies which inspired the poets and artists to their creations and opened new modes of thought and action to humanity."

Again, when in the last decades of the 13th and the first decades of the 14th century the church and the state were in bitter conflict and the Waldensians and other heretics were gaining adherents all over Europe, even among the nobility and the clergy, many members of the guilds, especially of the masons, adopted reform ideas and thus, beside carriers of technical science, these guilds became the propagators of brotherly-love and of toleration. It was also these guilds which offered to the heretical schools at the beginning of the reformation their best support and their best means to hide their existence. Döllinger says, that wherever the guilds were well represented heretical religious views were also well disseminated. The relation of the Bohemian Brothers to the academies of natural philosophers will be pointed out later.

Die Fruchtbringende Gesellschaft. It is a matter of history that as "heresy" was suppressed in one place or country it broke out in another. The alchemists, natural philosophers, and heretics had a secret means of communication all over Europe, and so we find that just as the Bohemian and Moravian societies are forced out of existence, across the border in Germany other societies with *other names* spring into life. In Germany, however, we meet with two kinds of societies, the so-called "Sprachgesellschaften" of the history of which something is known, and the societies of naturul philosophers of which we know very little. These two classes of societies were undoubtedly closely interrelated, since their organizations were very much alike and members of one were often also members of the other—in some instances there was probably very little difference in purpose and in aim.

By far the most prominent of the "Sprachgesellschaften" is the "Fruchtbringende," sometimes called "Der Palmbaum," founded by Ludwig von Anhalt in 1617. It has already been pointed out that it was an imitation of the *Crusca* in Florence which was chiefly a language society and of which Ludwig was a member. The aim of the society was set forth by Ludwig as follows: *Der Zweck ist allein auf die Deutsche Sprache und auf löbliche Tugenden . . . . . gerichtet.* In the regulations of the society, however, conduct is placed first and German second. Though one can see that for patriotic reasons these men should strive for a better development of the mother tongue, yet it is

a fact that none of the eight founders were literary men and many of its later members were not; neither could the foreign members, many of whom were Bohemians and Austrians, be of much service toward the development of the German language. The bond that held them together was probably a sameness of philosophical and religious conviction. Religion was not a bar to membership; though the majority of the members were Protestants, yet we find some Catholics among them.

At first the society gave its chief literary attention to translations. Translations had been made heretofore, it is true, but then chief emphasis was laid on context, now more attention was given to form. Later, two grammars of the German language were produced by members of the society, one by Schottel and one by Gueinzius. The latter's book was published in 1641 and was officially recognized by the society as the German grammar, though in some places Schottel's work was received with favor.

When one looks at a page of German of this period one can readily understand why patriotic Germans should feel the need of cultivating the vernacular. It was a mixture of German dialect, Latin, French and what not. Even the peasant in his conversation would feel himself on a higher plane of culture if he could patch in here and there a Latin or French word. Martin Opitz (1639) complains that everybody who wishes to appear cultured uses a few foreign words on every possible occasion. Latin had indeed rooted so firmly that Opitz suggests that in reforming the German the foreign endings of proper names be retained in order not to offend too severely.

The "Palmbaum" was a secret society; it kept its activity so secret that thirty years elapsed before traces of its constitution, symbolism, and membership became faintly known to the public. When, in 1673, the society was on the verge of dissolution its membership became known, and the world was astonished to find among the 789 members not only citizens and scholars but many powerful German princes. Among the foreigners we find King Charles Gustave of Sweden, the Great Elector of Brandenburg, and the great chancellor Oxenstierna; among scholars we find Harsdörfer, Bernegger, Opitz, Dornau and many others all of whom were pupils, friends, or admirers of Hugo Grotius, Galileo and Campanella.

As to the influence of the "Fruchtbringende Gesellschaft" opinions differ. Some think it was of little importance. Yet this society was the first to bring together a number of prominent men opposed to the "Sprachmengerei" in Germany, and it cultivated a feeling of patriotism during the thirty years' war when patriotism was at very low ebb. It produced a com-

prehensive German grammar, did much for orthography and versification, and took steps toward the compilation of a German dictionary,[1] but its great service was the purification of the Germau language. Within the society the principle of equal rights was recognized. When, 1647, it was suggested that only men of noble birth should be admitted to the inner ring, Ludwig objected and replied that scholars are noblemen. Furthermore, woman's equality with man was defended here. The work of the society was so well recognized that it was quite an advertisement for a book to have on its title page "Member of the Fruitful Society."

There were other societies for the purification of the German language, mostly imitations of the "Palmbaum," in which the tendency to go to extremes was often very strong. The "Palmbaum," was characterized by its moderation; its members constantly advised to keep foreign words that had become Germanized. Schultze says, "We to-day, in the matter of purifying the language, stand on the shoulder of the "Fruchtbringenden," we carry forward what they began and would indeed have much more to do had those men not so well prepared the way." Barthold says, "Through the efforts of this forgotten society our classical poets found a purified language which naturally adapted itself to poetic thoughts . . . . . such faithful sentinels of the language as Morhof, Leibniz, and Gottsched took courage when they thought of these never to be forgotten early champions." And we to-day agree with him when he says, if a language accepts complacently foreign elements, its deepest fountains dry up and not even the gods can bring back its original strength.

At the beginning of the 18th century attempts were made to found language societies on the model of those of the preceding century, and later we have as *scientific* continuations of the earlier "Sprachgesellschaften" the present German societies of Leipzig, Göttingen, Helmslädt, Jena, and Greifswald. About the time this society was organized Ratke, the man who first introduced German into the schools and into science, at the call of Ludwig, organized a school at Köthen, and Krohmeyer drew up the famous school ordinance for Sachse-Weimer which demanded that during the first three school years the main stress should be laid on the German—all this almost seventy years before Thomasius gave his first German lecture in the university.

The following are language societies modelled after the

[1] Ludwig bargained with Schottel for a German dictionary, but he did not publish it though he had collected much material. In 1671 the London Royal Society sent word to the "Fruchtbringende" that they expected a dictionary from them.

"Fruchtbringende:" (1) "Die Aufrichtige Gesellschaft von der Tannen," founded in 1633. (2) "Die Deutsch-Gesinnte Genossenschaft und die Neun-Stündige Hänsesschaft," founded by Zesen 1643 or 1644 in Hamburg. (3) "Die Pegnitz-Hirten Gesellschaft," founded at Nürnberg by Harsdörfer in 1642 or 1644. (4) "Der Elbische Schwanen Orden," founded by Rist in 1656.

We meet here and there with the names of several other language societies, but whether they were only planned or whether they really existed, is not known. Such were: "Der Belorbeerte Tauben Orden." "Die Teutschliebende Gesellschaft zu Regensburg." "Der Leopolden-Orden." "Die Görlitzische Poetische Gesellschaft."

Of all the language societies the "Fruchtbringende" was the strongest in membership, both as to number and to quality. It had more than three times as many members as any one of the others. It was the most productive, and none of the others practiced such wholesome moderation in their work of purification.

Academies of Natural Philosophers. Keller thinks that the real nature and influence of the "Sprachgesellschaften" has not yet been properly understood. He says, it is true, a number of modern investigators admit that the turning point in German literary history, connected with the name of Martin Opitz, could not have occurred so rapidly and so thoroughly without the energetic help of the "Fruchtbringende Gesellschaft," but that these same investigators fail to see that this society had a larger aim than a renewal of the national language and literature, that it rather (vielmehr) offered refuge and support to all those men who worked at the reform of scientific as well as spiritual life. He says the development of the mother tongue, thoroughly as it was in harmony with the general principles of the academy, for the initiated it was only the cloak which shielded their highest aims from the eyes of dangerous opponents. All recent investigators, he says, have been misled by taking the shell for the kernel. During the stormy years of its existence it was desirable to avoid all suspicion of politics and church politics and to adopt as a bond of union a goal that was practical and attainable. He would place them practically in a category with the societies of natural philosophers.

It is true, he says, that the members that were most active since 1622 were dominated by linguistic and literary interests, yet in the admission of new members greater stress was laid on likeness of sentiment and endeavor than on the German language. It is significant here that, as has been said, none of the eight founders were active, neither in the science of language nor in literature. Keller thinks it is also significant to

note that these academies, which really had had already a rather long history in Germany, began to develop more extensively during the very time when the "Gesinnungsgenossen" of Ludwig von Anhalt had gained a series of great and important political and religious successes; that in England their development was connected with the rise of Cromwell only to take on a different development after the restoration; and that in Germany after the victories of the counter reformation, Ludwig's academy directed its activity into other and more harmless channels.

Again, in 1647, Karl Gustaf von Hilles issued a pamphlet in defense and praise of the "Palmbaum" in which he said that within the society there were "secret things" which were known only to those who had the privilege to enter the castle at Köthen.[1] Keller thinks this is inexplicable if language and grammar were the sole aim of the society.

It is interesting to note here that only two preachers belonged to the society. J. V. Andreae, and Joh. Rist, both of whom got into trouble with the church because they were considered "Schwärmer" and fanatics. The latter belonged to the natural philosophers; in his house were a universal cabinet, distilling, and also mathematical apparatus.

Harnack does not agree with Keller that the mother tongue was only the cloak to hide the real aims of the academies from their enemies. He says, the vernacular and the new science went hand in hand; the spirit of the age expressed itself in natural science, mathematics, educational doctrine, and the vernacular. He would not deny that these societies stood for more than a cultivation of the mother tongue, but believes that the latter is an essential part of their activity. This view of Harnack seems to be sound. Their intense interest in humanity caused these men to develop vigorously the mother tongue, for it was only through the vernacular that they could reach the minds and hearts of the multitude.

Besides these so-called "Sprachgesellschaften" there were numerous other societies of natural philosophers of the existence of which we have only the merest traces. Their secrecy does not surprise us when we know that societies with such an innocent name as "Language Society" found it necessary, for fear of persecution, to keep their activity from the outside world. It was the alchymists and natural philosophers which were especially suspected by the church; they were suspected of belonging to the "Rosenkreuzer," an imaginary society supposedly of the greatest danger to the church, but which, in

[1] The society first met at Weimar, but later at Köthen. It also had local organizations at Brieg, Weimar and other places.

fact, never existed. This suspicion of the church caused the secrecy of these societies to be so close that we know little else about them than that their inner workings were like that of the "Sprachgesellschaften" and other similar societies, that alchemy was a kind of side issue, that philosophical interests were always in the foreground, that they had three degrees and that only those who were considered "safe" were admitted to the highest degree or "inner circle."

These natural philosophers of the 17th century had had their predecessors. Through a long line of persecuted seekers after truth they had learned, had not their personal experience taught them, that no man is a prophet in his own country, and that to carry forward a great idea in the face of powerful and bigoted opposition it takes a firmly organized society. Alchemy itself was not new. Practical chemistry was known to the Egyptians of old. Through the Arabians it passed from the east to Spain, and from there it spread all over Europe. Emperors and popes issued edicts and bulls against it but without avail. In the 13th century the great authorities in natural science, such as Albertus Magnus, Thomas Aquinas, Roger Bacon were in sympathy with it, and during the 15th and 16th centuries numerous rulers and princes on the continent and in England employed wandering alchemists. We can readily see the reason for this when we remember that some of the best chemists of the times, such as Basilius Valentinus, Paracelsus, Johann Baptist van Helmont, were found among the so-called alchemists, many of whom were earnest seekers after truth, and had no sympathy with cranks and charlatans, and objected to the names "alchemist" and "Rosenkreuzer" given them by their opponents.

From the correspondence of the members as well as from the attacks of their enemies we learn that quite a number of societies of alchemists and natural philosophers existed during the 17th century. Such societies were found at Vienna, Helmstädt, Lüneburg, Hamburg, Bremen, Erfurt, Danzig, Rostock, Nürnberg, Mantua, Venice, London, Amsterdam, and The Hague. In The Hague they even had a palace in which they held their meetings. It is known that in 1676 Johann Wulfert, a friend of Leibniz and later a member of the Berlin Academy, travelled through Germany to visit these societies.

The society at Rostock was founded by Joachim Jungius (1587-1657). Jungius was a man of great talent; he was naturalist, mathematician, and physician, and has been called the Bacon of Germany. He was a close friend of Leibniz and of Comenius and was a co-worker with Ratichus at his "Lehrkunst" in 1612, and even at that time he planned the

founding of an "Collegium." In 1618 he studied at Padua, a centre for science, medicine and Platonic philosophy. In 1619 he returned to Germany, spent several years at Rostock, where several friends of Valentine Andreae lived at the time, and there, in 1622, founded an academy quite independent of the university, on the model of the Italian academies and called it *Societas Ereunetica* or *Zetetica*, or *Collegium Philosophicum.*[1] The aim of this society was, the investigation of truth by reason and experience; to strive to free the arts and the sciences from sophistry, to bring them back to demonstrable certainty, disseminate them by instruction, and increase them by happy discoveries. It was a secret society, but all transactions which were not especially designated to be kept secret, could be made public. Jungius, as did the members of other societies, kept close friendly relations with the artists and tradesmen and had them inform him on scientific questions which, from the nature of their trade, they understood better. In 1625, in the turmoil of the thirty years' war, this society ceased to exist.

From his own day to ours, Jungius has been ranked amongst the foremost thinkers. Leibniz in his later years planned to issue a collection of the writings of Galileo, Campanella, Pascal, and Jungius, and said he considered Jungius second to none of the others. Goethe and Alexander von Humboldt held similar views, and Harnack says he is in more than one sense a Leibniz before Leibniz.

Another society of special interest to us is the one at Nürnberg founded in 1664. In 1667 Leibniz, at the age of 21, became a member and soon was made its secretary. This society had prominent men as members and carried on an extensive correspondence with similar societies in upper Italy, Germany, England, and Holland. The impressions which Leibniz received here, according to his own confession, remained with him through life.

One cannot leave this period without giving at least a brief account of Johann Valentine Andreae and his relations with, and influence upon, Comenius. Andreae's influence upon the men of his time can hardly be overestimated. He carried on correspondence with a very great number of men. With one of these men, who even did not stand very close to him, Brügel says, he exchanged in all 500 letters. "In order that life do not flit away without spice, I use the salt of friendship," he often said. He entered the University of Tübingen to study theology but early interested himself in natural science and mathe-

[1] He felt the need of a society for he said: "Wenn ich hätte allein sein sollen, so hätte ich keine Feder gegen die Schulmeinungen geführt." (Guhrauer.)

matics. Later he went to Switzerland, France, and Italy and here began his estrangement from the prevailing orthodoxy. He associated much with tradesmen and mechanics and was perhaps well acquainted with the religious conceptions that prevailed at the time among the labor guilds. In 1614 he returned to Würtemberg, wrote books which were widely circulated in Europe and were known to all the natural philosophers. He was a strenuous apostle of toleration and did a great deal to bring about religious peace. Though his opponents called him "astrologer," "Schwärmer," "sectarian," "fanatic," Spencer once exclaimed: "Could I, for the good of the church, awaken some one from the dead it would be J. V. Andreae." At the end of the 18th century Herder studied his writings, and later Schleirmacher did so, and it was a pupil of the latter, P. W. Hossbach, who published in 1819 the first monograph on the life of Andreae.

In Andreae's "Christenstadt" he advocates that men of different convictions should be allowed to live together, and to work for the same goal unmolested, and at the head there should be an academy or "Collegium" of scholars who were to devote their time to science. This idea was expressed before Bacon's "Novo Atlantis" was published.

Andreae was a deeply religious man but uncompromisingly opposed to the dogmatism and scholasticism of the church. He wished to overthrow the religious and the literary idols and place true Christianity in their place. And when, like Jungius, he found that individual efforts were not sufficient to carry out his ideas, he founded a *Societas Christiana*, of the activity of which we know little or nothing. He says in his biography that his burning love for the cause of Christianity had met on all sides with hate whenever he tried to advance it in a public manner, therefore he had seen the necessity of reaching his goal in a roundabout way.

Ever since 1617 Comenius studied the writings of Andreae with enthusiasm; it was the first step toward making him the friend and companion of the leaders of the academies. The more extended his correspondence became with the natural philosophers, and the more he became engrossed in mathematics and natural philosophy—which was about 1627—the more active he became in the reform movements of the 17th century. In 1628 Comenius asked Andreae to admit him among his pupils and sons; Andreae accepted him and soon after sent him the laws of the "*Societas Christiana*"—but they have not yet been found. In 1629 Comenius asked for the origin and history of the society. Andreae grants his wish and replies in a long letter in which he says his aim had been to break the religious and literary idols and put Christ in their place; he expressed

his great disappointment at his own failure and exhorts Comenius to carry forward the good cause which he says permits as co-workers all the peoples of the earth, but especially those Christians whose bond of union is exile. The history has not been found. Comenius himself calls him the learned and excellent Andreae and says, he, above all, deserves to be named among the men who worked at the improvement of the teaching method. He says Andreae gave the torch into his hand and cheered him on to risk something for the cause. How well he carried the torch the world knows.

H. F. von Criegern says that Comenius got his fundamental didactic and pansophic ideas from Andreae whom he often quotes literally, especially in his Labyrinth of the World. And Brügel says that Andreae laid the foundation upon which Comenius erected the admirable structure of his didactic. Comenius had also close relations with Hartlieb, Jungius, Harsdörfer, Dilherr, Zesen, Leibniz, Pömer, Wolzogen, Hübner and others. These men were the leading spirits of the age and the leaders of the academies of natural philosophers.

We have further evidence that Comenius stood close to the academies of natural philosophers. It is well known that members of the academies often used their symbol on their writings in order to stamp them as their own. Keller says Comenius used several such symbols which had been property of the academies since ancient times, one of them being the symbol which appears on the cover page of the "Monatshefte der Comenius Gesellschaft." Keller thinks he certainly would not have used these symbols without the consent of the academies. Moreover, the pansophical writings of Comenius were nowhere accepted with such approval as with the natural philosophers—not even with his own brethren. Comenius also knew something of the history of academies. He praised the *Accademia della Crusca* and the *Fruchtbringende Gesellschaft* and expressed the wish that among all peoples such academies might be founded. He realized that the academies working each for itself could easily be made the plaything of the powers that be, and that their influence would be largely local, and therefore he suggests in his "Via Lucis" that an attempt be made to form under a new name a higher organization of all the academies of all countries. He thought the time had come to unite "all sums with the sum of sums" and to found a *Collegium Catholicum* among the scholars of the earth. This *Collegium*, from the book of nature, from Holy Writ, and from the innate concepts of the members was to build up and improve pansophia; it was to cultivate a universal as well as the folk-languages; was to build and supervise schools in all countries, and was to have its beginning and centre in London under Crom-

well. This idea of Comenius was kept alive in London by Hartlieb and may have contributed to the founding of the "London Society."

When one compares the activities and constitutions, the world-conceptions and the religious principles of the academies of natural philosophers of the 17th century with those of the Bohemian Brothers and the Waldensians, one is immediately struck with the similarity between them. The following points of similarity may be noted:

1. The *socii*, *fratres*, and *perfecti* of the Bohemian Brothers correspond closely to the three degrees of the academies; and both had a picture language, secret recognition signs, as well as brother-names, all known only to the initiated.

2. The academies laid great emphasis on the mother tongue; and Gindley says no religious body has ever worked so emphatically and so systematically for the vernacular and for the establishment of a folk-literature as these Brothers.

3. While in the ruling church there was a great chasm between the rulers and the ruled, among the academies as well as with the Brothers, there was more democracy and all were encouraged to partake of the general culture and of all knowledge that was worth knowing.

4. Both believed in and worked for freedom of conscience; they refrained from forcing a religion upon others as much as they refused to have one forced upon themselves.

5. Though free from all confessional narrowness, and accused of heresy by the dominant church, both the Brothers and the Philosophers were mostly men filled with the deepest piety.

6. They preferred to emphasize the goodness of every soul and so brought sympathy and kindness into education, whereas the austere Luthern idea of the natural depravity of every soul led to unnecessary cruelty.

7. Both had a great love for nature; it is true, the Brothers did not accomplish much in this direction, but their very attitude was of great importance as compared with the attitude which considered all external nature as the work of the devil.

8. Both persistently advocated peace and good will to all mankind and especially were they anxious to see religious peace upon the earth.

9. The idea of the reformation of the whole world, advanced by the natural philosophers of the 17th century, is shown by Gindley to have been held by the Brothers as early as the 15th.

10. In the inner circles of both not only religion but also science was cultivated.

The men that belonged to these societies of natural philosophers were practical men. They held that science must mean something for life, an idea which we do well to lay to heart

to-day. Leibniz states their attitude well when he says, action must accompany words, life must profit by science. And in another place he says: "As often as I learn something new I immediately consider whether something for life cannot be gotten out of it." A science which had to remain unknown to the people on account of the very language in which it was written, could not be the aim of these philosophers and hence they made a fight for the vernacular, a fight which arrayed the church and most of the learned institutions against them.

The influence of these academies, whose aim was not only to increase the stock of human knowledge but also to make all knowledge fruitful for the education of man, can hardly be overestimated. What the Italian academies have done for the Italian language has been pointed out in an earlier chapter; in a similar manner the German academies were for a time an effective bulwark against the degeneration of the German language and literature. Keller says it is in these Platonic societies and not in the universities that we must look for the birthplace of the newer German literature, and he is certainly right when he says that that fact alone would make them a noteworthy historical phenomenon.

A number of the early Italian academies had devoted themselves to natural science, and these German academies, which were often called Socratic societies, carried forward that heritage. They held that to study the works of God would do more for the glorification of His holy name than the scholastic disputations which resounded in the halls of the universities. These philosophers were seekers after truth wherever they found it and often called themselves Platonists or Neo-Platonists and called their science *Pansophia* or Natural Philosophy. Schuster says: "It is to these natural philosophers, notwithstanding their shortcomings, that we owe the great change which separates the modern world-conception from that of the middle ages." And Keller is undoubtedly right when he says, that whatever may have become of these academies (as we know, some of them became social clubs, some literary societies, etc.) it is certain that at various periods of their existence they were for many prominent men, and not least so for Comenius, places of refuge of free thought, centres of high mental and moral endeavor, and the carriers and disseminators of great ideas of reform.

When one wishes fully to realize the influence of these societies one must compare their activity with the activity of the universities. The latter, as is well known, were drying up in arid scholasticism; they held aloof from the Platonists. Men of great originality could not live within their walls. The professors at the universities looked with contempt upon every-

thing outside of Thomas Aquinas and other accepted authorities of the church. The universities were church schools, and when we remember that their attitude was the same as that of the church, we can in some manner realize what it meant to break a lance for authors like Galileo, Grotius, Andreae, Bacon and others, as the natural philosophers did.

Petrarch called the universities seats of conceited ignorance. Leibniz held that universities were not adapted to serve the progress of science, and it is a matter of history that none of the great reformers in philosophy and in science were connected with the universities nor did they try to be. Paulsen says: "At the end of the 17th century the German universities had reached the lowest level they had ever had as far as the public esteem in which they were held and the influence they had on the German people were concerned. Leibniz despised a university appointment and justly hoped to find at the courts a better understanding and better support for his comprehensive plans of improving the culture of the German people. His indefatigable activity to found academies is an expression of his hopelessness as to the possibility of carrying on scientific investigations in the old universities."

To-day conditions are different in Germany. The German university is a seat of scientific investigation because it offers the greatest freedom to the scholar—it is indeed one of the freest spots on the face of the earth. Therefore we find the German scholar to be at the same time an academic teacher; among them are the philosophers, Christian Wolff, Kant, Fichte, Schelling, Hegel, Schleiermacher; the philologists Heyne, F. A. Wolf, G. Hermann, Boeckh; the scientists and mathematicians Gauss, Liebig, Helmholtz, Kirchhoff, Weierstrass, Virchow, Hertz, Roentgen; the poets, Uhland, Haller, Schiller, Rückert, Gellert; the jurists, Pufendorf, Thomasius, Savigny, Feuerbach, Niebuhr, Treitschke, and many others in all these different fields.

The same is not true in England nor in France, where the youths are not taught by the greatest scholars. The universities in these countries are not the carriers of science, this work still belongs to the great scientific academies. In England the greatest scholars were not connected with the universities, or at least did their great work outside of them. We may mention the following: Bacon, Hobbes, Shaftesbury, Locke, Hume, Ricardo, Bentham, Gibbon, Macaulay, Carlyle, the two Mills, Grote, Spencer, Priestly, Davy, Wallaston, Young, Dalton, Faraday, Joule, Green, Boole, John and William Hunter, Jenner, Astley, Cooper, Bright, Darwin, and others.

Merz says, referring to the scientists: "Through situation

or constitution the English universities were unable to open a field of activity for these celebrated men," whose names are identified with the greatest works in experimental science. And Paulsen says some of these men would have been impossible in the universities.

Three Royal Societies. The great Royal societies of Europe are a development of these private academies described above. Two of them began as private societies at a time when the academies of natural philosophers still flourished, and a third, though founded later, had as its founders and chief promoters men who had belonged to, and received their training in, the earlier private academies. It is not the aim here to give a history and an evaluation of the Royal societies, for they have multiplied to such an extent, and their work has been so vast and so important that a special study is required for every branch of science. Nor is it the aim to go into the history of the numberless other academies and learned societies of Europe and America, of which there are hundreds in England alone which has over 600 such societies in all. Yet it comes within the sphere of this paper to point out briefly the relation that the earlier private academies had to the three earliest and three of the greatest of the Royal societies, namely the French, the British, and the German (Berlin).

The French. As early as 1629, says Pellison, some men living in Paris had difficulty in finding one another and therefore resolved to meet on a certain day of the week at the house of one of their number. They were young men, one only a boy of 15, nine in number, not very brilliant, but "all men of letters and of merit above the ordinary." At their meetings they discussed in free conversation various topics, such as the news of the day, affairs, belle lettres, and often the literary work of some member.

The members intended to keep their meetings secret, but in 1634 Richelieu heard about the society and politely asked these men whether they would not like to assemble regularly under public authority. Some of the members being intimately connected with the Cardinal's enemies, there was considerable discussion, but finally the opinion prevailed that what Richelieu wished he wished seriously, and so agreeable or no, they thanked him for his kindness and accepted his offer. The king, Louis XIII, soon issued his edict and after some delay parliament registered the letters of establishment July 10, 1637 and the *Academie Français*, the name adopted after some deliberation by the members in session, was a fact.

The aim of the academy, being modelled after the Crusca, was to render the language capable of the greatest eloquence by cleansing it of its impurities. They wished that the French

heroes might be sung in as noble verse as the names of the heroes of old. To accomplish this aim the academy pledged itself in its statutes to make the following books: (1) An ample dictionary; (2) An exact grammar containing a section on the ornaments of language; (3) A Rhetoric; (4) A Poetic. Only the dictionary was completed.

Progress on their work was very slow. They began with the letter A and completed it in about 8½ months and then found that they had forgotten the word *Academie.* As the work progressed the speed slackened and it was not till 1694 that "The Dictionary of the French Academy" was published.

The academy of sciences in France was founded 1666. It began as a private society but was taken under the protection of the state by Colbert. The history of literature and of science in France cannot be written without the history of these two academies. Among its members we find most of the most brilliant French literateurs and scientists. Among them we find Corneille, Racine, Boileau, La Fontaine, Bossuet, Voltaire, Montesquieu, Buffon, Clairaut, d'Alembert, Huyghens, Mariotte, Mabillon, Rollin, Turgot, Lebrun, Mignard, Lesueur, Philippe de Champagne, Mansart, Soufflot, Chateaubriand, Victor Hugo, Lamartine, Alfred de Musset, Alfred de Vigny, Guizot, Thiers, Cousin, Monge, Berthollet, Lagrange, Laplace, Lavoissier, Fresnal, Ampère, Arago, Cuvier, Geoffroy Saint Hilaire, Cauchy, Chasles, Claude Bernard, Buffon, Jussieu, Rèamur.

The British. There were probably secret academies in England similar to those on the continent, the names of some of which are found in the correspondence of the natural philosophers; such were "Macaria," "Novo Atlantis," "Antilia," and "Utopia." It could hardly be otherwise, since in the early part of the 17th century many persecuted reformers, and especially Bohemian Brothers, fled to England for safety, and it was in London that Comenius published his "Via Lucis." Bruno is said to have gone to London to found an academy as early as 1583. The earliest society of which we have any definite record, however, is the *Academia Londinensis* founded in 1645.

According to Dr. John Wallis, one of the earliest members of this society, "several worthy persons residing in London who were inquisitive into natural and the new and experimental philosophy, agreed to meet weekly on a certain day, to discourse on such subjects." These meetings were suggested by Theodore Haak, a native of the Palatinate, and Samuel Hartlieb, of Eibing, at whose invitation Comenius had visited London, was an early member of the society.

Birch says: "Their business was, precluding affairs of state,

and questions of theology, to consider and discuss philosophical subjects, and whatever had any connection with them, as physic, anatomy, geometry, astronomy, navigation, statics, magnetism, chemistry, mechanics, and natural experiments, with the state of these studies, as then cultivated at home and abroad."

The rules adopted in 1660 provide for a weekly meeting; that no person shall be admitted without scrutiny except such as were of, or above, the rank of baron; that the number be 55; that 9 constitute a quorum for all business except elections when 21 are required; that no member be admitted on the same day he is proposed; that the officers consist of a president or director, a treasurer and a register, the first to be elected monthly, the other two yearly; that each member pay one shilling weekly to defray expenses.

In 1662 the academy was made The Royal Society and received a charter from the king. This society has largely determined the development of science in England, and its proceedings, published annually since 1665, is a monumental record of experimental science.

Berlin. It is admitted by every one that the Berlin society owes its origin largely to the untiring zeal of Leibniz, who held to the idea of founding academies with the persistency almost of an obsession. He once said that if he were pope he would parcel out scientific studies to the different orders of the church just as he would parcel out the works of mercy. As early as 1669 he drew up a plan for an academy. His idea was to found one central society with a number of branch societies all over Germany and societies for correspondence all over the world. In his plans, we know, he always tried to get some connection with China. This reminds one very much of the plans of Andreae and Comenius.

He had tried to found an academy in his home city, Hanover, but failed. After a visit to Paris, he however got new enthusiasm, and in 1676 he again worked for the establishment of an academy in Germany and urges correspondence to this effect with prominent scientists such as Weigel, Schwammerdam, Leewenhoeck, Tschirnhaus, and Gericke. In 1677 he planned a "Gesellschaft von Gottesfreunden" aimed against atheism and for the study of natural philosophy. In 1681 he planned a Magnetico-Mathematical Society which was to make observations all over Germany. In Frankfort he discussed with Hiob Ludolph the plan of a royal historical society. With the marriage of Sophia Charlotte of Hanover, a princess who had grown up under his influence, in 1684 to the elector prince Frederick of Brandenburg, Leibniz thought the time was propitious for the founding of an academy at Berlin. And to read

his efforts, his failures and his delays, his hopes and his despairs is almost tragical. Whenever his efforts seemed to fail in Berlin he directed them elsewhere. In 1704-5 he and Tschirnhaus had all the papers ready for the king to sign for an academy at Dresden. In 1711-12 he had several personal conferences and exchanged many letters with the czar concerning an academy at St. Petersburg. In 1712-14 he was in Vienna trying to found an academy there. But all his efforts were for the time being in vain.

The "Stiftungsbrief" for the Berlin academy was issued as early as July 11, 1700, just as it had been drawn up by Leibniz. It outlines the field of work in very general terms, probably purposely so; it gives to the society three chief aims: "Das Evangelisch-Civilisatorische," "das Naturwissenschaftlich-Praktische," and "das Deutsch Nationale" as Harnack puts it. Leibniz was made president and was to receive 1,000 Thaler as salary and reimbursment for correspondence and travelling expenses, but he never received more than 600, and even that seemed to be given grudgingly. There were several great obstacles to be overcome which brought the society several times to the verge of ruin. First, there was no money; secondly, King Frederic had lost faith in Leibniz because there was jealous opposition to the latter at the court. And so we find that when after a long and tedious struggle the academy was inaugurated on Jan. 19, 1711, it became known that an honorary president had been appointed who was also director, and Leibniz was only ordinary president. Thus after all these years of unrequited toil Leibniz was practically set aside and others were to reap the fruits of his labor.

On Nov. 14, 1716, Leibniz died lonely and forlorn, suspected by the House of Brandenburg and neglected by the House of Hanover. All his great plans seemed to shatter. But, Harnack says, what he created in the domain of mind has remained imperishable; nearly all his great projects have been gradually realized in the course of time. He did not only scatter seeds into the future, but he gave form to, and built the house for, scientific work for the future.

In 1740, with the accession of Frederic the Great, the academy was reorganized and received new impetus and ever since it has stood at the front of scientific activity in Germany. Harnack says: When one considers the discoveries and works of the mathematicians, physicists, the chemists, the astronomers, the botanists and the anatomists during the 40 years (1740-1780) one can say that this academy stood at the very apex of scientific activity and was not surpassed by any other. He says, the German enlightenment of the 18th century was largely due to the academy, and it was first through Leibniz and then

through the enlightenment that Germany entered upon world literature.

Amongst its members we find the brightest lights of science in Germany—such as Leibniz, Euler, Lagrange, Lambert, Lieberkühn, Achard, Gleditsch, the Humboldts, Helmholtz and others. In 1811, when the Berlin university was founded, the academy was affiliated with the university, but even to-day it is a greater honor to be a member of the academy than to be a professor in the university—it is the greatest honor that can be bestowed upon a German man of science.

The Berlin society did not begin as a private academy, but Leibniz and a number of the early members had in earlier years been connected with private academies in other parts of Europe. Leibniz, himself, confessed that Nürnberg first introduced him to chemical studies and that here he first learned what proved to be so useful to him in later years, namely, caution. The later royal societies in Europe were all more or less modelled after the first ones, and so we may say that, indirectly at least, all the European royal societies are an outgrowth and a development of the secret academies of natural philosophers of earlier times.

Summary.

In conclusion the following points may be noted. Points 5-11 refer chiefly to academies of the Renaissance and later.

1. Such associations of scholars have existed from early times, probably continuously, till the present; and before the modern university they were, and in some countries even now are, the great carriers of science.

2. These learned societies fostered open-mindedness toward truth which was in danger of being engulfed by ignorance and bigotry. They contributed largely toward keeping the idea of finality out of science. The men that belonged to them realized that the present is only a link between the past and the future, that science ever advances without reaching finality.

3. In various periods of their development the history of these academies constitutes the history of science or of literature, or of both, in the countries in which they flourished.

4. Those universities which are among the carriers of science to-day have adopted the principle of freedom which prevailed in the academies, because only by doing so could they attract the best scholars of their day.

5. The academies of the Renaissance and later cultivated the vernacular, and in northern Europe they were the birthplace of the newer German literature and brought about the enlightenment.

6. Much of the work of the great reformers in science and religion might not have borne fruit had it not been for these academies. They did not only disseminate the writings of these great men, but they were to them a haven of refuge during times of severe persecution.

7. They held that education must touch life,—a principle which to-day needs awakening in our education from the kinddergarten to the university.

8. As to the principle: Education is not for the few alone. these academies were the predecessors of Pestalozzi.

9. They advocated religious toleration—an idea which we to-day, even, have not yet developed to maturity.

10. They were the forerunners of the great royal societies of to-day.

11. In 1643 the Great Elector of Brandenburg became a member of the "Fruchtbringende Gesellschaft," and several other princes of the same house were members. After the founding of the university of Halle the princes of the house of Hohenzollern were educated there in the liberal ideas advocated by the academies and represented there by Thomasius, a disciple of Grotius, and the first man who lectured in German in a German university. What all this means for education and for religion the culture history of Germany amply shows.

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This bibliography is not intended to be complete, but rather to include the chief works consulted in this study. The book by Jos. Reber, and the one by Guhrauer are out of print and could not be found in this country. If a reader of this article knows where they can be bought or borrowed, Dr. Louis N. Wilson, Librarian of Clark University, will be thankful for the information.

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STUDIES OF A CHILD. III.

By Alexander F. and Isabel C. Chamberlain.

OUTLINE.

Introductory.
I. "Discoveries," First Experiences, etc.
II. "Favorite Books."
III. Language (Early Development).
IV. Nature-Study, etc.
V. *Obiter dicta.*
VI. Observations, etc., on seeing Pictures.
VII. Original and Peculiar Words.
VIII. "Original" Languages.
IX. Sentences.

In this section particular attention is given to R's "discoveries" and first experiences, the early development of her speech, her reactions to pictures, etc., and other aspects of her psychic life of special interest to the teacher and the psychologist *vom Fach.* In these data her own naïve personality is in evidence and her mental processes are often laid quite bare. The rubric "Nature-Study" is but a fragment and represents only a chip of her block of knowledge. Her *obiter dicta* furnish again some delightful turns of speech and of thought as well. Of her "original" and peculiar words a larger number than usual are rather noteworthy. Her "singing" speech seems now in process of development with the aid (or the hindrance, perhaps) of fragments of her "Chinese," etc.

I. "*Discoveries*," *First Experiences and Questionings.* One of the most interesting and delightful episodes in the life of a child is its "discovery" of something new in action or in speech or in the world about. Scarcely less so are the experiments and questionings of the child mind. Some of R's doings of this sort are as follows:

1. "*Talking*" *into mug.* On March 12, 1902 (eighth month), R. took up her silver mug in her hands, brought it to her mouth, and "talked" into it, seeming highly pleased with a new experience. About this time she did the same with a tin cup also.

2. *Splashing water.* On March 23 she "discovered" that she could splash the water in her bath tub with her hand. For a week afterwards she did not repeat the action.

3. *Noise of dropped objects.* In the latter part of March

1902, she began to look after things dropped (accidentally or deliberately) on the floor by her when in her carriage. By the middle of April she had discovered that they made a noise when dropped, and began regularly to drop them to hear the noise, which made her wink. Experimentation of this order delighted her for a long time.

4. *Face under water.* On April 13, 1902, when in the bath tub, she deliberately put her face under water, but became frightened when the water got into her mouth, and held out her arms for her mother to take her. Later (June 7) she fell under accidentally and was quite frightened.

5. *Throwing things on the floor.* Towards the end of May, 1902, she had discovered how to throw things on the floor, especially spoons, so as to make a noise. She sought continually to do this for some time.

6. *Use of index-finger.* About the same time she used her index-finger to point at and examine things. She took great interest in running her finger along the groove of the table, cracks in the floor, etc., with quite an explorative expression.

7. *Ice.* On May 25, 1902, R. was given for the first time a piece of ice. She put out her hand and touched it, then drew back. This movement she repeated several times, but at last picked it up, laughing all the time and making little inquiring gurgles. She then put it up to her mouth and "made an awful face," at first. But she played with it till it broke into two pieces. One of these she swallowed, then looked very much "surprised" for a few seconds, gagged, and spat it out. She took it up in her hands again but it soon melted. Her own first term for ice was *col(d)-hot.*

8. *Flies.* By June 22, 1902, she had developed quite an interest in flies. She would sit on the floor and watch one as long as she could see it. She would also, when held up, try to catch them on the window-panes. On July 6, she managed somehow to pick up a live fly from the window-blind. It escaped immediately, whereupon she smiled.

9. *Looking behind things.* In the latter part of June, 1902, R. took pleasure in looking behind things,—mirrors, pictures, etc. She would repeat the action again and again with great satisfaction.

10. *Ornaments.* By August 24, 1902, it was recorded that R. always noticed anything in the way of ornament that people had on,—jewelry, watches, pins, medals, buttons, etc. She would go from one person to another examining their ornaments with curious fingers.

11. *Beefsteak, etc.* On Sept. 16, 1902, she had her first piece of beefsteak to suck, and enjoyed it hugely. She enjoyed as much the next day her first chicken-bone. On Oct. 12,

1902, she ate soup for the first time, and the experience seemed rather pleasant for her.

12. *Upside down.* On Nov. 25, 1902, it is recorded that R. knows when her book is upside down and promptly turns it around.

13. *Image in eye.* By this time, also, she had discovered her image in her parents' eyes. She would point to it eagerly and say "baby," "baby," etc. She had earlier known the "baby" in the mirror, etc.

14. *Rolling over.* In the first part of December she had a new-found delight in rolling over and over on the floor, of her own initiative, or at request.

15. *Hot-air register.* By December 19, 1902, she had discovered some virtue in the hot-air register in the floor of her father's study, and began to take great delight in sitting down on it again and again.

16. *Whistle.* On Dec. 18, 1902, she learned to blow a wooden whistle, doing so remarkably well for one of her age.

17. *Soap-bubbles.* On Dec, 16, 1902, her mother made some soap-bubbles for R., while she was in her bath. She was delighted with the experience.

18. *Doors.* On Dec. 19, 1902, it is recorded that she was fond of experimenting with opening and shutting doors, going into the pantry, etc.

19. *Going into a corner.* About the same time she was very fond of going into a rather dark corner at the top of the stairs, whenever the door was opened.

20. *Turning round.* On Dec. 19, 1902, she was recorded to have turned round and round in a way that almost made the observers giddy. The same day she shook her head again and again with remarkable vigor.

21. *Kicking.* About this time she was noticed to be kicking at things with her feet and enjoying it as a new "discovery."

22. *Putting bread into milk.* A new experience on Dec. 19, 1902, was crumbling bread into her milk.

23. *Folding-door.* The same day, as she was lying flat on her back on the study floor, she took hold of one wing of the folding-door, and, finding that it moved to and fro, she kept at it for some time with evident satisfaction.

24. *Marking windows.* About this time she was very eager to mark the vapor or frost covered windows with a spoon, etc.

25. *Putting hands to ears, etc.* On January 6, 1903, for the first (?) time, R. put both hands up to her ears at once, and made noises. The sensation evidently pleased her, for she repeated it several times.

26. *Empty.* About this time she began to have some idea of

emptiness, for she would look into her cup, when empty, and say "gone," with the expression of having discovered something. On March 24, when, as was her habit, she put the coffee-can back on the pantry-shelf, she noticed that it was not so heavy as usual, and said, "all gone!"

27. *Drinking.* In the early part of January, 1903, R. had some satisfaction in trying to drink out of a cup herself, and by the middle of the month succeeded quite well.

28. *Box.* On Jan. 14, 1903, she amused herself very much by opening and shutting a little tin box. When asked to throw kisses, she kissed *into* the box.

29. *Playing horse.* On Jan. 21, 1903, R., who was sitting on the floor, took a piece of string, and, taking the ends in her hands, put it under her foot, saying, "*bā! bā!*" This was really her first attempt to "play horse," the "*bā! bā!*" being "back! back!" which she had heard said to horses in the yard and in the street.

30. *Book upside down.* On Jan. 23, she looked curiously at a large book wrongside up in the bookcase and seemed anxious to set it right. She was much pleased when her mother did this.

31. *Typewriter.* On March 6, 1903, it is recorded that R. was very fond of lifting the carriage of the typewriter to see what she had written. For some time previous she had often tried to "write."

32. *Removing plates, etc.* On April 5, while having dinner at a restaurant, R. noticed that the waiter had not taken her plate away, and said "Hír lēdlɛ, tēk plē' wē!" (Here, lady, take plate away.)

33. *Tail.* On April 7, after she had been pulling the kitten's tail, her mother said, "How would you like to have your tail pulled?" and then "where's R's tail?" R. then tried to look at the place where her tail would naturally be, pulled at her dress, and said "all gone!" Several times on various occasions after this she said her tail was "all gone."

34. *Hiding.* On April 8, 1903, it is recorded that she was acquiring the habit of hiding behind her back, or beneath her folded arms, things which she thought her parents might take from her. This she did with a certain naïve skill.

35. *Needle.* By April 13, she had come to say, when anything pricked her "needle in nér" (needle in there), which phrase she also employed when her hair pulled hard or jerked.

36. *Moon.* About the same time, while looking at the sky, she exclaimed suddenly, "Man-i-mūi way up!"—having noticed the position of the moon high in the sky.

37. *Crackers.* On April 13, it is recorded that on several

occasions, as she passed by a grocery store, she would look at the window and say, "Wawa in néE!" (Crackers in there!).

38. *Bambino.* On April 13, 1903, she stoutly maintained that the baby in the picture of the Madonna was a boy and not a girl.

39. *Negro.* On June 8, 1903, while out on the street, R. saw a negro on a watering cart, and exclaimed, "yat black man!" She has never been afraid of negroes.

40. *Water.* About this time, she was very fond of seeing the fountain spraying water in the University Park. Whenever she got in the neighborhood of it, she would call out, "Bē tee watE!" (Baby wants to see the water!).

41. *Jumping.* About this time, also, she was very fond of trying to stand on her head on the bed and "jumping" head-first off her father or mother on to the bed,—a sort of human "tobogganing," as it were. This she would keep up until quite tired out.

42. *Whiskers.* On Jan. 3, 1903, R. made this announcement; "Tather has whickers, and granpa has whickers, and oncle has n't any whickers, and mama has n't any whickers, all these three people ha'n't got any whickers, only just tather and granpa."

43. *Watch.* On Jan. 5, 1904, she asked, "How dit tover tut (shut) on dis wats?" About this period she would often ask, "Tee time at tather's wats?" or want to wind it, or hear it tick close to her ear.

44. *Chair.* The same day she played peek-a-boo behind a chair, and exclaimed, "Peekin'-a-boo at it tsair!"

45. *Blue eyes.* On July 11, 1904, she asked, "Why don't you have *blue eyes*, tather?" She had, a short time before, spoken of a "*blue* tiger."

46. *Girl.* On July 13, 1904, she said, "Tather, you ar'n't a *girl*, you have *whickers!*"

47. *Blue water.* "Does the tun (sun) make the water blue, mama?" (July 14, 1904.)

48. *Drinking through a straw.* On July 15, 1904, she tried to drink water through a straw. The expression on her face when she succeeded, was a study. She was so surprised when the water reached her throat. For several days after she was eager to use the straw.

49. *Bumble-bee.* On July 18, she remarked, "I 'm writin' to the bumble-bee," then added, laughingly, "Bumble-bees tan't write."

50. *Sweat.* On July 20, she said to her father, "Your hands aren't tweaty, your tace (face) is."

51. *Raspberries.* The same day she said of raspberries, "When I pick 'em, they roll down at me,—they tall (fall) off."

52. *Wind.* On July 20, 1904, when asked, "Is that Mr. Wind?" she said, "No! it's *Mrs.* Wind."

53. *Nails.* "Isn't any hair on my toe-nails!" Said while in the bath-tub, July 20, 1904.

54. *Barking.* On Aug. 2, when some one said of her squeaking toy-lamb that it "barked," R. observed, "No! lambs don't bark."

55. *Corn.* On Aug. 12, she said, with reference to the sweet corn at dinner, "Do you put butter on corns? I never saw corns with butter."

56. *Round.* On Aug. 16, she asked, "What does *round* say, mama?"

57. *Hammering.* By August 18 she had come to take great delight in hammering tacks into a piece of board, trying to drive nails into the wall, floor, etc., asking her father often to help her. Her first experiences in doing this "tickled" her very much.

58. *Storm.* On Aug. 26, looking out of the window, after getting up, R. said, "We 're goin' to have a storm now, and a thunder and a black sky."

59. *Rats, etc.* About this time she was fond of pushing berries through the cracks of the veranda-floor,—"for the rat and the mouse."

60. *Animals.* On Aug. 31, she was asked, "Which would you rather be, a kangaroo or an elephant? A skunk or a woodchuck? A porpoise or a seal? A lion or a hippopotamus?" She answered *immediately*, "a kangaroo," "a wood chuck," "a porpoise," "a lion." Skunk, porpoise, woodchuck, she had never seen, even in pictures.

61. *X.* On Sept. 8, 1904, she asked concerning the letter X on her building-blocks, "What's that who opens?"

62. *Moon.* On Sept. 22, 1904, R. saw the moon and a star out of the window. Then the following remarks ensued: Said R., "Why can't we have a moon in our house? And a little twinkle star? If you had a long, long ladder to reach 'way up in the sky, you could get a moon and a twinkle star, could n't you?"

Her mother asked what the ladder could rest on? R. said, "A board who goes across this way," illustrating with her hands. She then said, "If you did n't have a ladder, you could take a big stick, one of those long pipes who stick up (a telegraph-pole), you know, and reach the moon with it, and pull it right down."

The idea of the ladder seemed to please her very much, and she enumerated several things one could get if one only had a ladder long enough,—moon, star, cloud, trees, etc.

63. *Shadow.* On Oct. 13, 1904, while being undressed for

bed in the evening, she noticed her shadow on the wall, and said, "I'd like to see her face, mama. When will the shadow-baby turn around?"

64. *Playing baby.* The same day it was noticed that for the first time she "played *baby*" with her dolls. Up to this time they had been simply "dollies." Now she began to be "mother," and treated them as "babies."

65. *Fire.* On Oct. 24, she stepped accidentally on a match-head and set it off, whereupon she said, "I guess it was a fire."

66. *Sunlight.* On Nov. 1, when trying to look at the sun, she exclaimed, "I can't see wery well. It squeezes my eyes up tight."

67. *Snow.* On Nov. 13, when she went out in the back-yard to play in the snow, she said, "Don't go away, snow!" Soon after seeing the abundant snowflakes thick against the sky, she remarked, "Dirty snow!" Then asked, "Is that where the white snow be's?"

68. *Pop-corn.* On Nov. 25, while some corn was being popped, she exclaimed, "The pop-corns are *talking to each other.*"

69. *Encyclopedia.* On hearing (Dec. 17) that her father had a new encyclopedia, R. asked at once if it had kangaroos in it. She was early shown the picture of the kangaroos in "Chamber's Encyclopedia."

70. *Skating.* The same day while scuffing her feet along on the smooth snow, she said, "See, mama, I'm reg'larly skating on the sidewalk."

71. *Santa Claus.* On Dec. 22, she observed, " I would be scared to death, if Santa Claus was real,—if he was really real. He's only make-beblieve."

72. *Mouth warm.* On June 28, 1904, R. discovered that her "mouth was warm," and asked immediately if mama's was also.

73. *Long legs.* The same day she asked, "Do tather's legs go 'way up into his 'tummy?" Then she added, "Tather's legs are so long; R.'s are short, they cut the longness off."

74. *Name.* On Oct. 5, 1904, she asked, "Do little girls who ar'n't named *me* have dominos?" She had received a box of dominos as a present.

75. *Funny-bone.* On Feb. 20, 1904, R. struck her "funny-bone" against something for the first time, and did not know what to make of the sensation. When asked now where her "funny-bone" is, she answers "right in my elbow," pointing as she speaks. So far as recorded she seems to have had no other experiences with it.

76. *Palate.* Sometime in February, 1904, she heard her mother speaking of her "palate" and became interested in the

word, wanting to know what and where it was. Her mother showed her, and for some time thereafter, R. kept putting her fingers in her mouth trying to find it. She would say, "I have I palate, hav'n't I a palate, mama? Has tather a palate?" etc. She seems to have mistaken the uvula for the palate several times.

77. *Arms and legs.* On Jan. 20, 1905, she asked, "How do they fasten your arms and legs on so they won't come off?" This was probably suggested to her by observation of her jointed dolls, with which she had been playing.

78. *Fire.* On July 7, 1904, she was much interested in the "joss-sticks" used to keep away mosquitos, and was "tickled" when permitted to hold one. After some time she remarked, "Mama, I want to burn something!"

79. *Ants.* On July 8, 1904, while running about barefoot on the piazza she said, "Flies won't hurt you, mama!" Then, shortly afterwards, asked, "Will the gnats (*i. e.* 'ants') bite me?"

II. "*Favorite Books.*" As she was always permitted to be and to come into her father's study, R. began very early to handle books and amuse herself with them. Beyond pulling the back off a single volume she did no serious damage to any. Her "favorite books," somewhat in the order of their use, might be enumerated thus:

1. "Own Book." A copy of Figuier's "The Human Race," with many pictures and an attractive leather cover, was about the first book to awake her interest. She became very fond of it, insisted on taking it to bed with her, etc. It was one of the very first things to which she applied the possessive "own," calling it "*own* book," and being unwilling to let it out of her sight. Later, she would take delight in putting it back in the book-case, pulling it out, etc.

2. "Ab-bee-dee Book." When she came to sit on her father's lap at his study-table she noticed a little leather-bound volume, "Bellow's Pocket French and English Dictionary," the appearance and size of which attracted her. From analogy with the letters, etc., on her building-blocks, probably, she came to call this her "Ab-bee-dee book," *i. e.*, "A. B. C. book," in imitation of what she had heard her parents say. As late as July 5, 1904, and for some time after, she would ask for her "Ab-bee-dee book."

3. "Indin Book." One of the earliest books which she took any interest in were some volumes of the "Reports of the Bureau of American Ethnology." She would lie or sit on the floor and pore over the pictures in these with great satisfaction. She would ask for them again and again, and often nothing else would suit her,—even now a new "Indian book" is sure to please, and is sought with eager anticipation, and the questions she asked about the "Indin mans" have been legion. When her father began to read a new book she would very often ask, "Indins in it, tather?" She soon came to recognize an Indian in almost any book or picture, and would run to her parents, exclaiming joyously "there's an Indin!" The volumes of the Bureau Reports she named herself "*Indin* book," from the pictures of Indians in them. She would eagerly ask to look at a new one when her

father brought it home. On Aug. 18, 1904, while away from home at the seashore, she asked her father where "all his Indin books" were.

4. "Kangaroo Book." When very young, she heard her father, particularly, talk about a kangaroo, and would often ask him to show her one. She became so inquisitive on this matter that he showed her the picture accompanying the article "kangaroo" in "Chamber's Encyclopedia" (Vol. VI, 1890, p. 391). She was very much taken with this, and for a long time afterwards would ask several times a day to be carried to the book-case, for her father to get the volume and show her the picture. The word *kangaroo* seems to have appealed to her mind very much as the records of language show. The picture in "Chamber's Encyclopedia," she used to describe as "tangeroo tan'in up an' tangeroo lyin' down an' tangeroo runnin' away," and uttering these words in dramatic fashion she would eagerly ask to see it.

5. "Dónkel Book." On Feb. 24, 1903, her father showed her the pictures in Kipling's "Jungle Book," telling her the name of it. An hour or two afterwards R. went to the book-case and brought "dónkel" to papa and mama. Her usual name for this was "góndji book." For a considerable time she was very fond of it.

6. "Bla ta." The picture on the cover of the "Black Cat" magazine early caught her eye and pleased her much. On April 5, 1903, it is recorded that she was fond of asking for the "bla ta" (book).

Other early favorites of hers were the "Home Ladies' Journal Book," "My Mē (Mary) Lamb Book," the "Cow Book," "Chinese Mother Goose," etc. She began quite early to be interested in magazines and was eager to see them when they were first brought into the house. On Jan. 23, when asked what her favorite magazine was, she replied quite naïvely, "Harper's."

The following list of her books was given by her at her father's request on Jan. 10, 1905:

1. My Æsop's book. 2. Alice Book (Alice in Wonderland). 3. Mother Goose, Mr. Wootin gave me. 4. My rag books: Baby's Objic Book, Mother Hubbard Dog Book, My Circus Book, (Noah's Ark). 5. [Babyland—this she could not name]. 6. My Lamp Book (Aladdin). 7. Mother Goose, Mrs. Wootin sent me. 8. My Old Santa Claus Book. 9. My Brownie Book. 10. My Cow (*or* Cowy) Book.—After naming it she added, "See the cow's back sticking up to the sky!" in reference to one of the pictures. 11. My Night Before Christmas Book. 12. My Peter Rabbit Book. 13. My Poyem Book (a copy of her father's "Poems"). 14. My Piggie Book (contains "This little pig," etc.). 15. My two Jungle Books (Rudyard Kipling),—here she observed "You write my two ones." 16. My Doggie Book (Tales from Puppy Land). 17. Mother Goose Book. 18. Henny-Penny Book (Miss Wiltse's "Folk-Lore Stories"). 19. My Chinese Mother Goose (Headland's). 20. Alice in the Glass ("Alice in the Looking-glass").

These were all named by her in the order given.

III. *Language* (*early development*). R. was born (Aug. 3, 1901) with a voice strong and lusty, which she readily exercised. The "gurgle" of satisfaction, when she had got rid of wind, or made a movement of the bowels, was soon quite marked. The pain-cries preceding this were also *sui generis*. Also her long-drawn "sighs" when going to sleep. By the

beginning of September, 1901, she gave evidence of her enjoyment of her bath by the utterance of little "coos." Her dislike to being taken out and dressed was forcibly expressed by crying. On August 16, she uttered the sound "wĘ hā." On September 8, she said "goo!" and "ah-goo!" for the first time. It was rather a cold morning and her mother held her in her lap near the open oven of the stove. She evidently liked the feeling of warmth on her bare skin and said repeatedly "goo! ah-goo!" By September 24, she laughed "ha, ha!" with a smile on her face, and, while lying in her parent's arms, would go over quite a repertoire of sounds with many smiles and half-laughs. One of these was "gE" with a sharp sound made by inspiration, something like a 'crow'" (as her mother described it). Others were "ng-gah," "ngooooo," i ä i, etc. By this time her laughing and "crowing" in the bath-tub had become very characteristic. On September 27, she "talked" twice at her image in a large mirror. On the afternoon of October 12, she "talked" a good deal, the sounds being like the following which were taken down at the moment: Hĕ E! (breathings); ĕ ĕ ĕ (long drawn out); kuk ĕ; ĕ; gū'ā'ā'; ē g'ū ā (yawns).

By October 23, she did not "ah-goo" so much, but emitted a sort of sharp "chirp." She now cried for her mother when she saw her, changing, however, so rapidly to smiling and "cooing" that it was almost impossible to note the metamorphosis. On October 24, as she lay in her carriage, kicking about, crowing and talking to herself, her mother said she laughed out "ha ha" three times. In the early part of December she often used "ah-goo" again, very distinctly.

On December 22 her mother noticed that she was apparently "talking" sentences, or using speech with accents, etc., which gave almost the impression of some foreign language. This she would do for a long time, often for almost half-an-hour. Sometimes she would keep her finger in her mouth, adding thereby to the peculiarities of her utterances. On December 29 she seems to have uttered her first "word." This was "ah!" quite separate and unreduplicated. It is probable that she had been using it for a few days past, as her employment of it showed ease and and readiness. By January 4, 1902, she used "ah ah!" not infrequently. The same day her mother asked her "Where's papa?" In reply, apparently, R. used āh-āh-āh,—just as if she were calling some one. Toward the end of this month (Jan. 22) she used her "chirp" commonly when her father took her up, and sometimes "chirped" to call him. At this date she seemed to be using another "word." This was "odjī," which she employed only when she cried or fussed over anything. A little later she had developed special

"chirps" or calls for her parents (occasionally also for other persons). These she used particularly when her mother's back was turned, to attract her attention. She would also "blow" and make noises with her mouth, when in arms or lying down, —she was very fond of this. By February 17, it was noticed that the peculiar sound used by her when about to defecate was also employed in her "calls," "talk," etc. In "talking" she used her full repertory of sounds, and her calls to her parents became long and loud. On the evening of February 21, while lying in her mother's lap, she put the toe of her right foot into her mouth, but soon withdrew it, making a gesture of dislike (made a face, "turned up" her nose, etc.), and said, "w'äh āh ēh!" This was uttered as if expressive of a not very strong dislike.

By the end of February her interest in things outside the window,—horses, dogs, children, people, etc.,—had become very marked, and she "asked" for them and "talked" at them (at least made noises and uttered "calls" similar to those employed to her parents). On February 25-27, she was particularly active in this way, making "calls" and "chirrups" of all sorts, laughing and shouting at almost everything and everybody.

At this time, her mother thinks, she had some sort of understanding of the meaning of "bottle" (perhaps the first thing understood by her), "papa," "mama," "picture, (?)" "horse," (or rather, it may be, "something outside the window)," "want to go out," "love papa," "love mama," "peek-a-boo," and few more. Whenever she saw new objects in the street she looked "inquiringly" at her parents, as if she expected them to say something, or was about to do so herself. The "wee-wee" of the nursery-rhyme of "This little pig went to market," seemed clearly to be enjoyed by her now.

In the beginning of the next month (March 3-6) she was using the following sounds or words: "bō" (quite throaty), and often repeated, "bō bō bō;" "māmāmāmā" (with underlip drawn into mouth "pa pa pa" (whispered); "pápa" (quite plain) and "apápa;" "bábábáb." On March 9 she "loved" her image in the mirror, and said to it "pápa pápa." This word she also used to her father, when she wished to be taken up, and in the morning, when she waked, as if to call some one. For some time she had the fashion of almost whispering "pápa pápa," instead of calling it out loud, employing, however, quite often a longer form "papapa papa," which by March 9 was generally reduced to "pápa pápa," or "pápa." By March 10, her mother reports that she knew "by-by" (in the sense of going out in her carriage). She would hold out her hands and look at the door when asked "Ruth want to go

by-by with papa?" She also seemed to know that her father was going out when she saw him put on his hat.

On March 17, after having for two or three days hardly used them at all, she took again to saying "pápa," "bába," etc.

At this time she used frequently "gai gai gai" (with one or more fingers in her mouth); "yaiyaya;" "ma-ma-ma," when hungry, or crying for something; also "wā!" and often "wā wā!" She "talked" into her silver mug, and took great delight in so doing. By March 28, she had a common habit of "calling" loudly to persons in and out of the house, children especially,—when she was carried in her father's arms along the street, she kept up a continual "calling" of this kind. She seemed able to direct her voice towards people with some accuracy, and appears to use the intonations of conversation, as if saying "Hello!" "Come here!" "Now, I've got you," and the like, to objects and persons. On March 28 she "talked" to some gold-fish in a house where she was visiting. She laughed and shouted with glee at seeing her parents kiss each other. During the early part of the next month (April 13) she appeared to be using definite sounds or expressions for "I want it," and others of satisfaction at getting things. For several days before April 20, she waved her hand at her father, mother, and other persons, when asked to say "bye-bye,"—this possibly in imitation of her parents, who used to wave at her when going out. She now recognized her father and mother as far as she could see them out of the window, and "chirped" loudly at the first glimpse of them. On April 24 it was noticed that she was fond of repeating to herself the phrase "dĕti dĕti!" By May 4 she had learned to shake her hand or wave it regularly. She did this originally in response to the request of her parents to "shake a dēdē,"—long before this she was accustomed, of her own notion, to shake her hand, with or without a toy in it.

About this time she took to "cooing" again and used "pápa" rather infrequently. On the afternoon of May 4, she suddenly took to employing this word again with considerable zest; also "māma." When she said "pāpa" or "māma" she often drew in her under-lip with a sucking motion. By May 18 she was applying the term "māma" to her mother correctly, but did not so accurately call her father "pāpa." She "talked" a great deal now, using such sounds as: ta ta ta ĕ ĕ; a vru lub lub; dada blublū; na na nĕ na; mammamma, etc.

By June 8 she commonly pointed out things (especially those she wanted) with her index-finger (the rest closed under), saying "E E E,"—a sort of infinitely varied grunt. On the night of June 20 she "talked" to the rising moon, out of the window. On July 6 she went to see some small monkeys

in a cage. She fed them with cherries, etc., and when they chattered she "talked" to them, apparently in imitation. On the evening of July 4 she "talked" at the fire-works. About this time she was again noticed to be using words: nÉm'nEm ="food" (this she coined herself, and used, when she was hungry or when she saw her bottle); ublE! a favorite exclamation when interested in anything; EE! a multiform and multisignificant grunt; dä-dä-dä-dä, used without any special meaning.

By July 10 (she was at Bayville, Me., from July 9 to September 12) she had taken to "reading" the newspaper. She would hold it in front of her with both hands, calling out, just as if reading aloud, with very good expression, and in a most striking manner. During August she endeavored to say "hello!" making out of it "a-lō-alō." On August 24 her mother recorded the following: "'Mama' and 'pápa' still form the larger part of her vocabulary. She says 'bā-bā' for 'bye bye,' on the proper occasions. Also 'bu'h' for 'book,' sometimes very distinctly. She seems willing to try to pronounce any word beginning with *b*, but seldom gets further than the first sound. When asked to say 'pretty, pretty,' she gets her mouth already to say *p*, then says 'pi-tÉ, pi-tÉ.'" At this time, also, she gave "nEm-i-nEm" to her doll. By the time she left Bayville she could say "bai bai!" (bye bye) very nicely. She had a knowledge of many things: bath, bed, bobo, book, boots, burn, carriage, cat, chair, chin, down, drink, ear, eat, fly, jump, nose, out, shoes, stockings, table, teeth, up, etc., although she has not mastered all their names. On September 28 she said "mā'ū" in imitation of a cat. Also (pointing to the bath-tub) "dī bā," *i. e.*, "see bath." At this time she used also "bā" = watch, clock; "d'ā" = that (I want that); t'tī = kitty. On November 20 she said "baba" to her image in the eyes of her parents. About this time, while calling her mother "mama," she applied to her father the curious term "bab-ma," in the use of which she seemed to take great pleasure. For doll she used "dada," and for baby, "baba" (sometimes bēbē). She now knew, also, "bE" (bird), "bŏ" (bottle, box), etc. At this time she had become very fond of books, looking at them, turning over the leaves and "talking" about the pictures. She now said "mā ū" on seeing cats, and when asked what the dog says answered "bă!" and, for the bird, "bēi." Now she tried very hard to talk and endeavored to repeat what was said to her.

On November 23 her mother records the following words as established in her vocabulary: Bā-bā (or bēbē), "baby;" bāh', "watch, clock," bā-bā (or bai-bai), "bye bye;" bē'h (or bdĕh), "bread;" blō, "blocks;" buh, "book;" dä-dä, "dolly;"

däk, "Jack" (the dog of a friend); dŏn (or gŏn), "gone;" miluk (or mluh), "milk;" wa-wa, "cracker, biscuit." On November 30 it was noted that she applied the term "bābā" (or bēbē) to the reflections of herself in mirrors, lids of pails (and like bright surfaces), her parents' eyes, the bell of the alarm-clock, the glass of the window (and of pictures, etc.), brass studs on chairs, etc., shadow on the wall, and practically everywhere that she could see it. By December 19 she was using "pápa" very seldom, and often applied the word "máma" to her father. At this time she would pat her father's knee, or a chair, and say "bába," meaning, evidently, "baby wants to get up (or sit up)." She used also dā, or dādā, in the sense of "baby wants to get down." On December 19, she said "pik!" when asked what the bird said. At this time, also, she would come to her father and say "bui'," *i. e.*, "build blocks," in which activity she had now become much interested. She now called women "gɛ" (apparently = girl) and used bē'bē very often for bā'bā. She used also "mā'" for man (on the street, in a picture, etc.), and sometimes "bŏ" for boy. Her mastery of *s* had not yet come, and in attempting to sound it she made a sort of *th* with closed teeth,—"*th* ū," shoe, etc. At this time, also, there were some signs of her trying to call her father "dādā."

On December 19, seeing a baby beside a bed, in a magazine-picture, she said "bĕ bába," *i. e.*, "bed, baby;" and, when she saw another picture of a baby in a bath-tub, "bā bē'bē," *i. e.*, "bath, baby." About this time she had a marked tendency to prefix an *a* to the word she used, or imitated, as a-bĕ (bear), a-bɛ (bird), a-bŏ (boat), amáma (mother), apápa (father), abába (baby). She knew now the meanings of "sing" and "thank you." In response to a request to "sing," she would do so in her own fashion. "Thank you" she expressed by nodding her head quite vigorously, and was beginning to use the same sign for "yes." For "no" she would now shake her head emphatically. She used now bā, or bābā, in the sense of "back," "put it back," "I want it put back," etc. Her vocabulary at this time included, among others not recorded, the following: Bā (with many variations of accent, tone, etc.), back, bath, clock, watch; bába, baby; bāh, bark (what the dog says); bē'bē, baby; bɛ, bird; bɛ lɛ́, blocks; bɛ lɛ́ blɛ, pretty; bī (what bird says); blā, stocking (from "black"); bŭ (or bĕ), bread, biscuit, butter; bū, burn; buh, book; dā (or dā'dā) down; dā (djā, djāk), Jack (dog's name); ēlt'it'tɛ, chicken; mīāū, cat (what cat says); m'lɛ, milk; vɛ, horse.

On December 23, when shown a picture of herself on a chair, she pointed to it and made the characteristic noise for "sitting, I want to sit." At this time she now used bā'bā and bē'bē,

apparently indifferently, of herself. When, on Christmas day, she saw the Christmas tree and its ornaments, she was very much pleased and kept saying "bli bli," *i. e.*, "pretty," and "bā bā," *i. e.*, "ball," in reference to the balls suspended from its branches. A little later (January 3, 1903), while "Aunt Emily," a friend of the family, was in the house, R. tried very hard to say "Emily," once she made it "Am 'lɛ," but immediately afterwards "Alɛm." By January 6, her grunt-like "eh-eh-eh" has come to mean many things, particularly, "take me up," "I want it put up here," "put it down," etc. On this day she began to use "bōbō" for her chamber-chair and like utensils. On Jan. 5, R. was being taken out for a ride in her carriage. When on Woodland Street, her parents started to go down Downing Street towards Main, *i. e.*, away from the University, which is farther along on Woodland. R. began to cry and pointed in the direction of the University, shook her head, and said vigorously "no! no!" and *mama* (*i. e.*, "papa"), meaning thereby that she wanted to go to the University where papa was (she had been brought to see him there often). In the midst of her crying, however, she happened to look up and caught sight of the moon. When she had done anything particular, put her doll in a chair, placed anything particular on her head, built up her blocks, or when her mother or her father had done something of this sort for her, she would say, in a tone of satisfaction or triumph, "náɛ! náɛ!" possibly her re-rendering of "there! there!" At this time she used very commonly "wawa" (cracker) and "blĕ" (bread). When wanting to go out she would often say "bā'ba!" (bonnet), meaning thereby that she wanted to have her bonnet put on and be taken out. Sometimes she would put something on her head, go towards the door and say "bye bye!" waving her hand and pretending to go out. About this time she began to use "dâ" (dog) for "dog," instead of the earlier "d'ack" (Jack, the name of the dog of a friend). When asked what a certain friend of the family does when he smokes, R. stopped crying, pointed up and said "mūⁿ, mūⁿ," and seemed contented. Shortly afterward when approaching the University from the direction of Main Street, she held out her hands and laughed. She always recognized the University at this period, whenever she saw it. When coming home, she looked up at the moon again and said "mūⁿ mūⁿ," without any suggestion from her parents. On Jan. 6, it is recorded that she had been for some time in the habit of scolding herself in grunting fashion after doing something "wrong," such (as wetting the floor, spilling anything, etc.). At this time she was using regularly "mō" or "mŏ" (*i. e.*, *more*) in the senses of "give me some more, do it again, I want the other, I want another,

shake hands again, kiss me again, I want some more food, water, etc." When about to do something "wrong," she would say to herself "no! no!" and shake her head. When would go through the motion of blowing smoke and say "bai! bai!" *i. e.*, pīpe, pīpe." This section ends with her eighteenth month.

IV. *Nature-Observations, etc.* On Sept. 8, 1904, while at the seashore in Maine, she was asked about her knowledge of trees, plants, berries, fruits, natural objects, etc., with results as follows: Of *flowers*, she said she knew, clover, golden-rod, daisies, dandelions, roses, pond-lilies, buttercups. Of "*berries:*" choke-cherries, blueberries, blackberries, raspberries, strawberries, checkerberries, bunch-berries, juniper-berries, huckleberries, cranberries, acorns, rose-apples. Of *fruits:* Apples, pears, plums, peaches, melons, pineapples, bananas, grapes ("blue and white"), corn, chestnuts ("my *chestnuts* are at home,"—here she confused *chestnuts* and *chessmen*). Of "*stones:*" Little stones, big stones, and dirt. Of *natural objects:* Stars ("only yellow"), sun, moon, rainbow, clouds, sky, lightning, thunder, rain, snow, wind. Of *plants:* Trees, grass, "warms" (timothy), juniper, toad-stools. Of things relating to the *sea* and the *seashore:* Fishes, sand ("near to the shore"), jelly-fish ("purple and white"), I never saw a red jelly-fish, eels, boat ("row-boat, sail-boats, steamers"), islands, tide, wharf, logs, sea-weed ("big tails of sea-weed like snakes who crawl"). Of *insects,* etc.: Bees ("who sting"), flies, mosquitoes, butterflies, bumble-bees, moths, daddy-long-legs, spiders, caterpillars, snakes, beetles, worms, grasshoppers. Of *birds:* Bluebirds, sparrows, robins, sea-gulls, crows, pigeons.

This does not at all exhaust her knowledge, but is merely what she could tell at one sitting. At this time she had abandoned her earlier classification of all trees into "leaf-trees," and "Christmas trees," and was speaking of "Christmas trees" (fir, pine), "oak-trees" and "birch-trees."

V. *Obiter dicta.* Following are more of her sayings worth recording here:

1. Father, it 's raining! *Shoot* the rain! (Dec. 8, 1904.)
2. O, I feel so tired and *silly!* (Dec. 30, 1904.)
3. I feel like drinking *a whole tap* of water (Jan. 3, 1905).
4. I got a *cunning little chin*, hav 'n't I, tather? (Jan. 18, 1905.)
5. I want to show you my *collection* of dolls. (Jan. 1, 1905.)
6. Just a little bit! That 'll *saterfy* me! (Dec. 17, 1904.)
7. Won 't you be *jiggered* when Christmas Day comes? (Dec. 17, 1904.)
8. I would be *scared to death* if I had two mothers! (Dec. 22, 1904.) She had been rebuked for some naughtiness, and when her father said to her "If you had some other mother you might have been spanked," she replied as above.

9. Tather, can you stay home to-night? (Dec. 22, 1904.) Said when her father had gone out for several evenings in succession.

10. *Kids* mean little boys and girls, don't they, mama? (Jan., 1905.) Her mother said, "No, a kid is a baby-goat." R. then said "No it is n't, it 's a little girl," and, when asked further "where did you learn that?" replied, "X says that way."

11. The idea! (Dec. 5, 1904.) She has lately used this expression quite frequently.

12. Did you ever hear of such a thing? (Jan., 1905.) She often used this as follows: "Did you ever hear of a gingerbread doll who could walk?" When her mother says "No! did you?" R. says yes, and proceeds to tell some extraordinary tale about it.

13. What did the little *filly-go* have on his feet? (Jan. 6, 1905.) This was due to hearing the rhyme

> Shoe the old horse,
> Shoe the old mare!
> Let the little filly go bare, bare, bare!

On the spur of the moment her parent asked, "What the little *filly-go* look like?" She replied, "It looks like a *panel*."

14. Did you ever see a cat turning upside down and standing on his back?" (Jan. 4, 1904.) To her parents' "Did you?" She replied "No!" and continued, "Either a dog? Dogs do that."

15. When will the gingerbread lady stop smiling? (Jan. 13, 1905.) Said of one of the ornaments of her Christmas tree.

16. I feel eat-y all up candy-y. (Jan. 13, 1905.)

17. Tather says *boots*. Why don't he always say *shoes?* (Oct. 30, 1904.) To this she added—"big, long shoes. I saw some long long shoes at Mr. N's store, who go away way up the knees."

18. I want to ride '*tummy-way!* (Jan. 17, 1905, and before.) '*Tummy-way* is the *belly-bumpers* of New England children, who coast or "slide."

19. I used to go to school when I was four years old (Dec., 1904.) She was then three years and four months and had never been to school.

20. Will tather be sorry if I don't kiss him good-night? (Jan. 18, 1905.)

21. I'm having a *toe-cage*, swinging on tather's old Mr. Toe. (Dec. 31, 1904.) Then she added, "Old Mr. Tōp!"

22. Looks like a *bum* lady! (Jan. 3, 1905.) This was caught up from an acquaintance outside the home, and has been but once used by R.

23. Come back by dinner-time, won't you? (Jan. 3. 1905.) This is often her parting word to her father as he goes out of the house.

24. I want to learn everything so I can teach my dollies. (Jan. 14, 1905.)

26. I want to get a little more fresh air. (Jan. 18, 1905.) Said when her father was about to take her home.

27. I want a pair of skates who don't strap and a hawky-stick! (Dec., 1904, Jan., 1905.) During the winter she has been teasing for skates and a hockey-stick.

28. Does the wild *hurricane-fly* sting? (Nov. 19, 1904.) This is due to the line in the poem "The Night Before Christmas"—"As dry leaves that before the wild hurricane fly," which had been read to her. She also said, in reference to her blocks, "I'm going to make a hurricane-fly's house." For some time after she continued to play with the term "hurricane fly."

29. Has the man in the moon got the sky off him now? (Nov. 21, 1904.) Said when the sky cleared and the moon was again visible.

30. I feel back-yard play-y. (Nov. 24, 1904.)

31. The much you hav'n't got, the much you've got. (Dec. 3, 1904.) This was repeated several times in an oracular sort of way. When asked where she got this expression she replied "Out of Mother Goose."

32. Why don't you let me go to the kindergarten? (Dec. 3, 1904.) She had heard some one ask her mother if R. went to the kindergarten.

33. "When I was four years old, did I use to go to school and have desk and a pen and a blotter?" (Dec. 4, 1904.)

34. I want some more stories tolden to my dolls (Jan. 18, 1905).

35. Mama, I'll roast, if you don't stop putting these many blankets (Jan. 8, 1905).

36. Mens don't wear muffs! (Jan. 4. 1905.)

37. Then there's June, that's in the spring-time. June is in the spring-time. (Jan. 14, 1905.)

38. Did you ever hear a lady say bow-wow? And mens and girls and boys? (Jan. 20, 1905.)

VI. *Observations and Actions on Seeing Pictures, Picture-stories, etc.* In the fall of 1902 she was already very fond of looking at pictures in books and "talking" at them or about them. On Dec. 19, seeing the picture of a baby in a bath-tub she exclaimed "bā, (bath) bē'bē!" The same day, looking at a magazine-picture of a baby beside a bed, she said "Bĕ bába!" *i. e.*, "bed, baby." On Dec. 23, when shown a picture of herself on a chair, R. pointed it and made her characteristic noise for "sitting" or "I want to sit." On Jan. 22, 1903, seeing a picture of a child with its hands above its head, R., without any suggestion from anybody, put her hands up in like manner, and, later in the day, seeing another picture in which a little girl was putting her hands up to reach something on a tree, R. imitated this action likewise. On the afternoon of Feb. 24, while her mother was out, R. spent a long time looking over the pictures in Kipling's "Jungle Book,"—"dónkɛl," she called it,—of which she was fond. Soon after her mother came home R. went to the book-case and brought "dónkɛl" for her to look at. Another name she had for it about this time was "gŏndjī."

On March 6, she was looking at a picture of Shakespeare over the book-case and at one of Jesus next to it, when she called the second "mō'ɛ bī'ɛ" *i. e.*, "Shakespeare again" or "another Shakespeare,—*bi*ɛ was her reproduction, at the time, of *Shakespeare*. The term "mō'ɛ bī'ɛ" she applied also to a small picture of Robert Louis Stevenson. A picture of Gladstone she called "dō," the nearest she could come to his name at first. A picture of Browning she called "dāⁿdā" (*i. e.*, grandpa), from the white hair, probably. At the same time she called attention to the "bō'" (*i. e.*, bonnet) in a picture of Hosea, the prophet, and to the "bímbɛ" (pencil, or pen) in the hand of Stevenson. In the spring of 1903, she was very fond of kissing the pictures of her parents, relatives and friends dis-

played about the front room, and would ask to be carried round so that she could do so. Of her mother's picture, in particular, she would say repeatedly "tĭ máma dĕn!" "I want to kiss mama again!" She soon got to know a considerable number of these photographs separately. On April 5, 1903, looking at a picture of the Madonna, she exclaimed, "Bē' tlī on máma!" *i. e.*, "that baby is sleeping on her mama!"

Seeing, on June 8, 1903, the picture of an animal on its hind-legs she exclaimed: Tā ai lēg! "It's standing on its hind legs." At this time, also, she always recognized sleeping persons and animals, and would say, *e. g.*, "Yat bē' chlī" = "that baby is asleep." The same day, looking at the picture of a bear and her cubs, she exclaimed, "Tī máma bē'E, tī lī' bē'E," *i. e.*, "see the mother bear, see the little bears."

On June 9, when she saw a picture of a donkey, she attempted to sing a song, "Mary, sings the donkey, to his little lass," which a caller had sung to her several weeks before.

On July 20, 1904, looking at the picture (in Harper's for July, 1904), in which a lion was represented as having got up on a bed, she exclaimed: "A tunny (funny) lion lyin' on a bed!" and, again, "Here's a lion tittin' on a bed!" At this she laughed heartily. During the early part of December, 1904, she had given her "The Fables of Æsop" (Chicago: Conkey), the illustrations of which interested her much. Her mother also read many of the fables over to her. On Dec. 18, 1904, with the book before her, R. began to "read" and "tell" about the various pictures. Following are her remarks, as recorded by her father:

1. A fox and a goat sat down one time on a stool, but they fell down on the ground. They went to sleep on the ground, and they woke up and they heard somebody coming. And it was a lady, and she had *a great big bundle of a goat and a fox in it.* But she dropped it down and untied it so the fox and goat could look at it. But they ate it all up, the goat did. (Picture of fox getting out of well on goat's head.)

2. One day there was a stag out to walk in the pond, *but he did n't go 'way under.* But he was getting up to sit down in the water and *have a nice little sit-down.* But he got up and standed up and fell over and *standed on his back.* And when he got through standing on his back, he fell up and standed on his head. And that 's all of this. (Picture of stag looking into the pool.)

3. There was a cock and a hen once out one day, out their little house, but they *found some smoke coming out of the chu-chus,* but wer' n't scared to death, but they said to the chu-chus, "Don't you come, 'cause this is *where us live*" (here R. added, pointing to the top of the picture, "Way off there is where they live"). And the chu-chu said, "Well, I guess I won't come, but to-morrow morning I'll come in your house." And they said, "It's pretty nearly time for you to go out, chu-chu." But he rolled down-stairs like this (R. shook her head), and he *rolled his head over, got on his track, and run run all the time* till he got to his own house. (Picture of cock and the jewel.)

4. There was a peacock once. A peacock went out to walk with a young lady. I guess that's all. (Picture of Juno and the peacock.)

5. The stag once lived in the ox stall *once a little while*. But at night he went in his own barn, in his own house. (Picture of stag in ox stall.)

6. But the fox and the goat they climbed up the tree,—the goat climbed up this tree and the fox climbed up that tree. They said together, "*Will you, O will you go with me, or won't you?*" (Same picture as for No. 1.) R. added here: "Turn round another page *who's empty*."

7. Somebody tied a poor lion in a net, and a little mouse came along to untie so that the lion could break that. Here (turning to picture of lioness on next page) the lion *brushed down his hair*. And look at the poor little mouse, he stepped on him. The lion leaned his head against the wall and put his hind pâr (paw) out like this (making motion with her foot), and stepped on the little mouse. (Picture of lion and mouse.)

8. Here a stork and a fox. And the fox said to the stork, "Will you, O will you come over to my house?" The stork is getting ready to go over to the fox's house. (Picture of fox and stork.)

9. One day there was some frogs and rabbits come together in a *shower of water*, here (then she said, "How did that one jump here?" pointing to one of the animals in the picture). But these rabbits were *going to a tea-party at school*, but they said to the brother, if all the brothers could come with me and let the mother stay home and get the dinner. (Picture of the hares and frogs.)

10. The fox and the mask went out to walk one day, but the fox holded the mask and *went out to walk on the chu-chu cars*. (Picture of the fox and the mask.)

11. There was a fox and a cock up on top of a fence. But the fox said to the cock, "Will you come down here and stay down here all day, and have supper with us some time. *There's lots of bed for you*. Some time to-night. (Picture of the cock and the fox.)

12. A boar and a ass went out to walk in the woods one night, and they found some smoke coming out of the chu-chu. (Picture of the boar and the ass.)

13. The tiger and the fox said to each other one day,—the tiger said to the fox and the fox said to the tiger, "A *Chinese dollie* would do for you for your Christmas present, would n't it?" The tiger said to the fox, "O will, O will you, O won't you come in to my house?" (Picture of fox and tiger.)

14. A stork wanted to go to a tea-party, to have his dinner. So he did. (Picture of stork in "The Frogs desiring a King.")

15. A lion and bulls went out to walk one day, one night. Last night they went out to walk. But that one 's *trying to smell of the lion* and see if it 's something good to eat. And the lion said to the bulls, "*Japanese*," he said to them. (Picture of the lion and the four bulls.)

16. A peacock and some ducks, and stork, and all the birds, and the magpie and a owl. And what is that kind of a thing? I guess it must be another kind of a stork—a funny stork. I don't like that kind of a stork, do you? There was a rooster—is that a rooster? A cock leaned 'way down on the ground to get some dirt to eat (moving her own head), and that's the way cocks eat. (Picture of the peacock and the magpie, surrounded by all the birds.) To this she added, "The animals went out to walk. The owl and the stork went out to walk.

17. There was a pig and a fox leaning through that window out of his house. There was a mother pig and great big tather pig, and

mother fox,—that's a tather fox, and that's a mother's. And the dogs were trying to get to the fox, but they could n't. The fox ran away as fast as he could. (Pictures of the sow and the wolf and cat and fox.)

18. The dog went out to walk, and opened the door and he went into somebody's house and *climbed on the shelf* and got a bone out of some pork (meat), and he ate it all up. (Picture of the dog and his shadow.)

19. One day there were some sheeps and wolfs and dogs and sheeps went out to walk. I guess that's all of this. (Picture of the wolves and the sheep.)

20. A fox and a bear. The fox said to the bear, O will you, O will you *come over to the store?*" I guess that 's all. (Picture of the fox and the wolf.)

21. The mule and horse went out to walk one day. And the mule had something on his back, but the horse did n't. (Picture of the horse and the laden ass.)

22. The fox is eating the bramble-bushes. (Picture of the fox and the bramble.)

23. The goose and the man. They found some apples he thought he would eat. That 's all, I guess. (Picture of the man and the goose that laid the golden egg.)

24. That's when they went out again (Picture of the vain jack-daw being stripped of his feathers).

25. The birds and the eagle. (Picture of the hawk and pigeon.)

26. The fox fell down in the well again. That fox is trying to pull him up again. (Picture of the fox in the well.)

27. The stork and the fox went into a house. But he went out and he found his mother. (Picture of the wolf and the crane.)

28. A kid and a wolf went out to walk one night. The *man and the moon shining out* one night. The *dandelion and the daisies shining out*. (Picture of the kid and the wolf.)

29. The mouses and the cat, and the rats ran round. This is *the rat who 's got the long tail*. All these are the mouses. (Picture of the cat and the mice.)

30. What does that bird be so fat for? What does he be so fat? Cunning fox! (Picture of the kite and the pigeons, and the fox and the crow.)

These 30 "stories" were all told at one sitting, and the effect of fatigue in the little narrator is perhaps noticeable towards the close. Her use of familiar expressions often clothing common experiences of her own is characteristic: Ate it all up, went out to walk one day, once a little while, will you, O will you? going to a tea-party, stay home and get the dinner, come over to the store, etc. Her attention to the details in some of the pictures is shown by the mention of the "smoke" in No. 3, the dead mouse in No. 7, the "dandelions," and the daisies in No. 28, the long tails of the mice in No. 30. Faults of the pictures are partly responsible for her seeing "smoke" in several of them (*e. g.*, Nos. 3 and 12), for thinking it was *night* in some others (*e. g.*, No. 12), for taking a crane for a stork (No. 27), a wolf for a fox (No. 17), a wolf for a bear (No 20), the "bridge" for a shelf (No. 18), etc. In many of these her own individuality of expression crops out (*e. g.*, Nos. 1, 2, 3, 5, 7, 9, 11, 13, 15, 26, 29, etc.). The mention of "Chinese"

(No. 13), and "Japanese" (No. 15) is significant. These "stories" give insight into her thinking and her method of composition better than anything else, since they are all in her own words, unchanged, and uninterfered with,—exactly as she spoke them.

On Jan. 18, 1905, she looked at pictures in Headland's "Chinese Mother Goose Rhymes" (N. Y., 1900), and told about them as follows:

1. One little spider went up an' down, and six little boys were playing. A spider was going up and down in the air, and two little Japanese fellows were playing with a whip . . . . It said sixteen up to that funny one (picture on cover).
2. Two big Chinese fellows said to the little one, "How do you do?" (p. 7.)
3. A little girl looking at her toe. (p. 8.)
4. Three little boys were looking at a tree (p. 9).
5. One big Chinese lady had a little butterfly on her finger (p. 10). —As she said this she showed with her own fingers how the butterfly was held.
6. One Chinese baby, one Chinese lady, one Chinese man and little boy. And they lived in a big house with funny kind of windows, and they said to the little boy, "How do you do?"—that Chinese lady did (p. 11).
7. Mama will get some dinner for the little baby there, while the man is holding her (p. 12).
8. Baby and papa and I were down at the seashore,—and that's all, I guess (p. 13).
9. One pig and a man was watching the black pig eating his dinner. There is a picture of a pig up there! (p. 14.)
10. Gran'pa and I and two little girls, and baby and papa was feeding baby, and papa said to baby, "I think you had enough" (p. 15).
11. That man says, "I think you are *my* little baby. (p. 16.)
12. One big boy and one little boy were playing with *theirselves* and having their pictures *tooken*. And they were standing still as a mouse. (p. 17.)
13. One man and a boy were walking out to get some water (p. 19).
14. The boy was going to get a bag, and he did n't know where the *bag-store* was (p. 20).
15. A little boy and a girl were out to walk one day, and the little boy said to the little girl, "I think you are tired," and the little girl said, "I am." And the boy sat down and rocked her to sleep. (p. 21.)
16. That's about a man standing still and having his picture *took* (p. 22).
17. A little girl was sitting on a chair and sewing something. (p. 23.)
18. A little girl and a lady were walking out one Monday. And the little girl said to the big mama, "I want a drink of water." The little girl said she wanted a drink of water, that's all (p. 24).
19. A big girl was wheeling something round and round and round and round (p. 26).
20. A big man was rocking baby to sleep, and baby did cry. And she wanted a drink of water; she wanted her supper (p. 29).
21. A boy and a man were in a barn somewhere, and the man said to the little boy, "How do you do?" (p. 30.)
22. And a little boy had a butterfly on his finger (p. 31).

23. This is about a baby and a lady and a boy went out to walk one day. And the boy said to the man, "I want a drink of water" (p. 32).
24. And a man was sitting on a donkey *tail-way*, and the donkey was lonesome without anybody sitting *around front* (p. 33).
25. Those big two Chinese boys found a grasshopper, and they thought it was a *dead* bumble-bee (p. 34).—Then, pointing to the musical notation, she said, "This 's what the birdies sing. Are you writing the music, tather?"
26. And two men were carrying *a stick of pail* with two pails of water on it, with a string to it,—they cut a piece of stick off a tree. (p. 36.)
27. I hope that man is n't going to kill that thing up there. One little baby and one man were sitting on a chair and looking at that little thing there (p. 38).
28. A little girl broke a bottle at home, and they had to go down town to get another bottle for the little girl (p. 39).
29. A man was looking at a crow on a tree, and the crow said to the man, "*Crow!*" (p. 41.)
30. I don't really know what that thing is. Is it a tower? (p. 43.)

Here R., having spoken the foregoing without interruption, said, "I'm too tired," and occupied herself otherwise.

Some of the "stories" have no direct relation to the pictures concerning, as may be seen by examining the book in which they occur, being more than once relations of her own personal experiences. Some are brief but accurate descriptions of the pictures. Several exhibit her naïve genius, *e. g.*, Nos. 12, 14, 24, 25, 26, 29, particularly, Nos. 24, 25.

On October 25, 1904, R. was looking at a picture of a mother holding her little girl. The following conversation ensued:

Ruth. "I don't like that kind of a mother?"

Mother. "Why?"

R. "She 's got dark hair."

M. "Don't you like dark hair?"

R. "No! I like mothers who have light hair. I like little girls who have dark hair, though." Her own mother's hair is "light."

VII. *"Original" and Peculiar Words.* Of words of this sort the following may be added to those previously recorded:

1. *Beep.* Said of the dripping of the water-faucet (Dec. 20, 1904), "It's *beeping*." Used also since as a regular word.
2. *Krookra.* Declared by her on Dec. 20, 1904, to mean "Christmas."
3. *Fees.* Defined by her, Jan. 19, 1905, as "handles of doors," On Jan. 21, she said, "I guess handles of drawers are *feezes*."
4. *Coughin'-pops.* On Jan. 10, 1905, some one said of the picture of a baby that it looked as if it had had the measles, the whooping-cough and the chicken-pox. R., who heard what was said, observed at once, "He looks as if he had the *coughin'-pops*. This expression is perhaps her creation from "whooping-cough" and "chicken-pox," confused in her mind.
5. *Eny-mony.* The same day she said "I want one of those *eny-mony* books." She had just before got off "eny mony, puddin' an' pie!" This is borrowed from the counting out rhyme.

6. *Pining.* On Jan. 10, 1905, she said "I'm going to do some more *pining!*" By this she meant picking up pine-needles which had fallen to the floor from the Christmas tree.

7. *Scun.* Soon after she said, "Do you want me to *scun* 'em up?"

8-9. *Dunk, cuddy.* On Dec. 22, 1904, she observed, "I want a *dunk* of *cuddy*. On being asked what it was, she replied "it means something good to eat."

10. *Write-penna.* "I want a *write-penna*" (Jan. 6, 1905). By this she meant a pen to write with.

11-12. *Filly-go* and *hurricane-fly.* See under the rubric *Obiter Dicta.*

13. *Panel.* When asked (Jan. 6, 1905) what the "filly-go" looked like, she said, "It looks like a *panel.*"

14. *Jindō.* On Jan. 14, 1905, when asked what she was doing, she replied, "I'm playing *Jindō,*" and added, "*Jindō* means 'tongue.'"

15. *Pangaroo.* Given in a list of animals she knew, Jan. 18, 1905. Modeled on *kangaroo.*

16. *Rag up.* On Jan. 18, 1905, while twisting herself up in the curtain of the folding-door, she said, "I must *rag up* the curtain."

17. *Tomorrowteen.* The same day, while repeating some numbers, she asked, "Do you know what *tomorrowteen* means?" Then she added, "It's a funny kind of number"

18. *Oneteen.* On Jan. 8, 1905, while repeating numbers, she used several times *oneteen.*

19. *Loosanga!* The same day she used this word as a sort of exclamation.

20. *Toe-dy nut.* On Jan. 8, 1905 (and for some time before that), she called a Brazil-nut a "*toe-dy* nut." This came, doubtless, from her having heard this nut spoken of by the colloquial name, "nigger toe."

21. *Crickety.* On Jan. 8, 1905, she said "Georgiana's a *crickety* doll." This was because her doll was jointed and creaked a good deal when its arms and legs were moved.

22. *Tail-way.* Used Jan. 18, 1905, of a man sitting facing the donkey's tail (in a picture). The proper way, according to her, was "around front."

23. *Stick of pail.* Her term (see further under rubric relating to *Pictures*) for the carrying stick used by water-porters.

24-25. *Dinnerer.* On Nov. 18, 1904, she said to her mother, who was getting breakfast ready, "I'll get dinner ready," then added, "I'm the *dinnerer*, and you're the *breakfaster.*"

26. *Ham Componion.* On Nov. 25, 1904, she called "The Woman's Home Companion," the *Ham Componion.*

27. *Napmink.* This was long her common word for table napkin.

28. *Pick nutter.* On Dec. 17, 1904, she said of a nut-pick, "This is a *pick nutter.*"

29. *Cold.* She still uses very commonly "*cold*" for "coal."

30. *Deezy.* She spoke of the steps being *deezy* (Dec. 18, 1904). When asked what it meant she replied "Steps so that people won't fall on them." *Deezy* would seem to be the opposite of "slippery."

31. *Allwheres.* On Jan. 21, 1905, she was playing painting the wall. In answer to the question, "Where did you see anybody painting the wall?" She said, "Allwheres."

32. *Zogzy.* Used Jan. 21, 1905. Her father had said to her, "you know what *deezy* means." She said "and *zogzy.*" She defined *zogzy* as meaning "log you sit on when you go bathing at the sea-shore."

33. *Skade.* In writing her "Chinese" letter, Jan. 21 she used the word *skades*, and said to her father, "Do you want to know what *skades* meau." And, then "*skades* are rings you put around your finger" (using her hands to show how).

34. *Snake-business.* Soon after, while still writing, she exclaimed, "This 'll be the *snake-business* I'm doing now." This she explained as "the snakes going into the water."

35. *Whole sail* (?) During the same "writing," she looked up and said, "Was it in Elm Park, tather, we saw the ducks?" then added "the ducks were in the water, a *whole sail* (?) of ducks." When asked what the word meant she said, "I don't know, only ducks."

36. *Gar.* Defined Dec. 30, 1904, as "a *gar* is a boy who don't like to go to skooyal."

37. *Scissors-pudding.* This was her first attempt (Jan. 3, 1905) at "*Yorkshire* pudding." The "sizErs" seemed to have no connection, apparently with *scissors*, until by an after-thought, R. said "it 's scissors-pudding, because there's scissors in it"—this was said somewhat facetiously. Her mother, rightly, perhaps, says that the *shire* of "York*shire* suggested *shears* (a word not very much used by R.), then *scissors.*

38. *Dish-elephant.* On Jan. 3, 1905, when given some money she said, "I'll put it in my *dish-elephant.*" Her elephant toy-bank is made of glazed ware, whence the analogy with *dish.*

39. *Shirleywood.* On Dec. 30, 1904, she said that she lived on *Shirleywood* Street." This word she evidently formed from "Shirley St.," and "Maywood St.," "Hollywood St.," with which she is familiar.

40. *Toe-cage.* See under rubric *Obiter Dicta.*

41. *Tipping.* "One walking toe and one *tipping* toe" (Oct. 31, 1904).

Specially interesting in this list are Nos. 1, 2, 8, 9, 10, 19, 30, 32, 33, 36 for "original words." For twists of form or signification: Nos. 6, 21, 22, 23, 28, etc. Nos. 4, 11, 12, 17, 18, 34 are *sui generis.*

VIII. "*Original Languages,*" *etc.* So far she does not seem to have developed any other "original" language like her "Chinese" or "Skov'n," previously described. When asked if she can still talk them she says "no," or "I don't want to," and she has not been heard to use them of late. On Jan. 18, 1905, when asked to talk "Chinese," she got off the following, which might almost pass for a "counting-out" rhyme:

Hoozin dee and sixteen and cordy, forn, sane, bay, bang, hammock, chairs, cherub, blueberry, huckleberry, raspberry, Smith.

A short time after, when asked to name the animals she knew, she enumerated these:

Kangaroo, pangaroo, tigaroo, elephantroo, lionroo, donkeyroo, dogroo, bearroo, camelroo, sheeproo, pigroo, horseroo.

It is curious that she took from *kangaroo* (evidently the model) not—*aroo* but *roo*—and used it as a terminal,—one might have expected "dog*a*roo," "elephant*a*roo," etc.

The same day, shortly after the above was recorded, she said that she would *write* some "Chinese." She took her pencil and while making marks all over a piece of paper, spoke the following:

Hoozin dee and *coffin dee* and the dawn's early light, and all in the

night we go to bed at six. All in the morning we get our dinner by seven o'clock, and that's the home of it. And I got a pair of skates, and hâky (hockey) stick and a ball, And there's all the ships in the water and I must go out in the backyard to see the ships; that's all we could do. And that's *ashâwn* ship in the big water, and there were two men, two boys and two ladies sitting in it to go into everybody's house. And this is a knife you cut the meat with, all the *skayzin skawn*. And here's the *nowlëes skayst* and the man-and-the-moon up here and all the *skades*. And the *skades* are socks und skeins and watches *kon* this is *baskwá* day and this is summer day, and I forget when spring-day came [Here she wanted her pencil sharpened and said: I guess I used up all the writing of this pencil]. And now is *geestos hay* dis fish, and this is I'm going to fish down in the seashore. And where's my bait and pail. And stars look out and don't fall in the water. And sailors *aynons squandge*. Knock said pain, and there's a lovely water's green, and the sake-saw is staying on the bird's head, and that's what the bird said. And here's the bird's nest, and we begin and put the bird in, and he don't come out. [Here she observed: I have to draw some more *hoozin dee*.] This 'll be the snake-business I'm doing. I mean snakes going in water. Were there ducks at Elm Park, tather? —A whole sail of them! It's *bart's* barn, *bart's* barn, and the *scorkles* has rocks, a lounge, and there's the lounge I see.—I want to lie on because I am very sleepy. *Forskell* on and *skolles* ace and on. It's *gollis skottis gosp*. *Gok a nuswin*. *Swaydin's* potters scout. Swun. I don't know. *Ans sopis* whisper.

When done she observed: "This 'll be *zogzadee* instead of *hoozin dee*. Perhaps by *zoggza dee* she means to designate the curious stuff she now "sings" off,—*hoozin dee* being a synonym for "Chinese." Just at present (it was first noticed by her mother about the early part of October 1904—but is now much more developed)—she often "sings" as she goes about the house or is sitting at leisure, or even playing, a rhythmic but unintelligible song. Sometimes this changes to English words, and sometimes there can be detected a good deal of "Chinese," and the like in it.

IX. *Sentences, etc.* As illustrating the virtues and defects of her conversational style the following sentences, etc., covering the period from July, 1904, to January, 1905 (thirty-sixth to forty-second month), may be given:

1. *All* I taw (saw) the children playing in the church, *you know* (July 8, 1904).
2. O, all the children were going to church, but I don't want them to (July 8, 1904).
3. He did n't hurt me, he came right close to me! (July 15, 1904.) Said of a dog who rushed by her.
4. This is a nice tool breeze tomin' t'rough the window. (July 17, 1904.)
5. I don't want to be *tooken* up to the house. (July 18, 1904.)
6. Oh, the house *in back of* us! (July 19, 1904.)
7. Did you eat your blueberries and raspberries *in the bush?* (July 20, 1904.)
8. There is lots of blackberries at *a Tirley Street home* inne (in the) field. (July 20, 1904.)
9. How good it *smells* here! (Aug. 12, 1904.)

10. I don't want to go in those *nasty* boats! (Aug. 19, 1904.)
11. I don't want to tell nothing at all (Aug. 25, 1904).
12. Mama, can I stand up in the tub without my shirt on, before I take a bath? (Aug. 27, 1904.)
13. I don't want you to wash me *now yet* (Aug. 27, 1904).
14. *Most* a big girl, ai'nt I? (Aug. 27, 1904.)
15. Wait till I get down stairs, I won't forget. (Sept. 3, 1904.)
16. Yes I are, *either!* (Sept. 22, 1904.)
17. I guess it was a *surely* piece of wood. (Oct. 24, 1904.)
18. I did *pretty most* of it. (Nov. 13, 1904.)
19. There's two dogs barking *at 'emselves!* (Nov. 18, 1904.)
20. My footwarmers are all *piled together inside.* (Jan. 1, 1605.)
21. Can't you stay *before* (*i. e.*, till) night? (Jan. 1, 1905.)
22. I'm going to *stand together* at Helen McGwee's and see *how big her is and me* (Dec. 30, 1904).
23. You have too many dishes, you only need two (Dec. 31, 1904).
24. It looks *better like* a rabbit (Dec. 31, 1904).
25. I'm *a little bit bigger* to have a Tam-o'-Shanter (Dec. 31, 1904). Her mother had previously told her that she could have one when she was "a little bigger." This was R's way of saying "I'm big enough now to have a Tam-o-Shanter."
26. The snow is deep now, so I can go out to play! (Jan. 3, 1905.)
27. I *shutted* the dampers, it *blowed* on them (Oct. 31, 1904).
28. It (kitten) was *tooken* away from its mother (Oct. 31, 1904).
29. You sit down *with Lucy and I* and Betty (Jan. 8, 1905).
20. I want my tree *litten*! (Jan. 8, 1905.)
31. A cunning little bit of thing *you never saw* (Jan. 8, 1905).
32. Move your legs together and keep them together! (Jan. 14, 1905.)
33. Never mind looking over them again to see if they go on this foot. (Jan. 14, 1905.)
34. That's a *surely right* one! (Jan. 14, 1905.)
35. I want to pull it 'way 'way far up (Jan. 14, 1905). Said of stockings.
36. Cleaning house is an awful job *I never saw to do.* (Jan. 23, 1905.)
37. I had this an awful long time ago (Jan. 23, 1905).
38. You hav n't *aten* it all up. (Jan. 11, 1905.)
39. If I would go with you that would be a shame (Jan. 4, 1905).
40. I don't want to have any more talking. (Jan. 18, 1905.)

Interesting are the verbal forms exhibited in Nos. 5, 27, 28, 30 (*litten* is *sui generis*), 38. Also the phraseology in Nos. 22, 24, 25, 31, 36, in particular.

CERTAIN DEGENERATIVE TENDENCIES AMONG TEACHERS.[1]

By G. Stanley Hall.

Many diseases (the English Pharmacological Society catalogued over seven hundred) have always preyed on man, and one of the noblest and most influential of all professions has always been that of healer. The mind has its own special pathology. More recently the study of crime, or moral aberrations, has become an academic department with a copious literature of its own. Pedagogical pathology is barely ten years old. It now has its journals, its experts, and the faults of children are catalogued in dictionaries and prescribed for in articles, and, in France, even treated by hypnotism. Last comes the pathology of religion which, we are now coming to understand, like everything else, has diseases of its own among both primitive and cultured people; and one of the most interesting of the premises of the future is that we shall have established norms to distinguish what is healthful and what is morbid in religious consciousness and life. The pathology of teachers and teaching is a still newer topic, to a very few aspects of which I have the honor to invite your attention this morning. I am already fully persuaded that this theme, too, has a great future and that the next decade will witness the development of a new chapter in education devoted to the diseases of the body and mind of male and female teachers and of educational systems.

Copious as is the literature on the health of pupils, almost nothing has yet been done in this country in studying the health of teachers, and in Europe many problems in the field are unsettled. Teachers' work is extremely monotonous and allows little change for the ups and downs of health. No school ventilation is adequate, and teachers are not only exposed to impure air loaded with chalk and other dust, but to all the infections in the community. The diseases most common among teachers are nerve strain and tire, colds, disorders of the throat and lungs, hemorrhoids and troubles of the lower part of the trunk. Anemia and enlargement of the heart are thought by Wehmer to be common. In Germany, although the teachers at the outset of their career undergo physical examination which weeds out all the weak, it has been found that

[1] Address before the Social Science Association, April, 1905.

up to about forty, deaths are more frequent among them than in the average of the community, and that they die earlier on the average down the grades, that is, professors outliving primary teachers; that, in the country with small pay and more exposure, mortality is greater. Galton found that out of 116 English teachers, 23 had suffered a serious breakdown, from which 21 of these thought that they had never quite recovered. Those who have studied the subject most thoroughly lay great stress upon the restricted expressions of individuality which the modern methods of the public school, with its supervision and incessant prescription, affords. This, it is often said, damps, if it does not destroy, the zest that every one ought to feel in his calling, predisposes to a feeling of tedium, if not to depression, nervous irritability, and sometimes even hypochondria.

An American physician, who has a large practice among female teachers of one of our large cities, tells me that they are, in some respects, a class by themselves, their work predisposing them to certain diatheses and to wearing themselves out before their time. All insist that the long vacation is none too long for teachers, and that evenings and nights should be kept free, and that other occupations and all unnecessary work should be indulged in with moderation always, and very tentatively in the first years of teaching, before one learns the subtle line so easily crossed between normal income and output of energy and overdrawing of one's energies.

Few who enter the service of the public school expect to remain for life. Their work is, therefore, if not a makeshift, usually more or less temporary and provisional. But a small per cent. in the country at large have any professional preparation, and the pay, while often very attractive to those who have debts to pay for their education, or desire to lay by something for other fields of work, is not satisfactory as a permanency. Nearly one hundred thousand teachers will leave the profession this summer. When times are hard the supply of male teachers increases, and when business flourishes it declines again. Many of the ablest men in the country have served a brief apprenticeship in the teaching profession. Some of them have done something to elevate it, but would, of course, have done far more had they remained in it. No one would claim that it is generally the worst who drop out. Were it so, selective influences would always steadily improve the quality of the teaching force. Unfortunately, despite many striking exceptions which will recur to every mind, on the whole, those who remain do so not because they love the work supremely, but because opportunities to better their condition do not open to them. In grammar and even high school grades very few indeed plan their work as a life career. Even promotions in grade or pay are not made

on merit, and, in the rare instances, where a new superintendent or board has attempted to drop inefficient or superannuated teachers, their friends and the public rallies to their support. In some communities there is a confessed tendency for the corps of teachers to degenerate in quality. Few who are found in the ranks at the age of fifty would not have been shocked and depressed if condemned to this fate at the age of twenty-five. Some, especially men, who enter the profession with enthusiasm, are disenchanted because they find so little independence, and soon realize that in the question of methods, course of study, text-books, discipline, no provision is made, to submit these vital matters to those most concerned in them — namely, the teachers themselves. In our system it is ever harder for a self-respecting and able man to adjust himself to the dependent conditions of actual teaching. Whenever the question of permanence in office and of pensions is raised, this problem of deterioration always looms up in the background, though it is rarely named. In the grades the teacher must obey the principal and superintendent.

In the high school he must follow the prescriptions of the college. Moreover, teachers' organizations, which were begun by Horace Mann, and have been such a blessing, have now reached the point where certain dangers threaten. Sometimes weak officials of the craft, or questionable methods, have been indirectly sanctioned by the authority of teachers' organizations.

Last summer Miss M. A. Haley advocated that teachers should organize on the principle of labor unions to demand higher wages and better conditions generally. The major premise of this argument was that the status and pay of teachers was proportionately less than it was a decade ago. Now one great vice of trades unions is that they seek to force their services and their wage scales upon employers and thus, in a large degree, remove their members from the necessity of improving the quality and quantity of their work. This latter is the wholesome and legitimate means of advancement, and if solidarity reduces the force of this motive, it so far tends to degrade the vocation. There is no triter commonplace than that teaching ought to rank with the learned professions, but there are certainly now strong tendencies to make it a trade guild, the members of which organize for mutual support, defence, advancement, and the protection of the unfit, and by so doing, interfere with healthful selective influences which favor the survival of the best.

A pedagogue's position is unique. In his little domain he is monarch, wisest, best, and his authority is in many ways final, and by constant association with children he is liable to grow

complacent even in ignorance, impatient of contradiction by his peers, and incapable of maintaining the eager receptive attitude of the student and learner towards his superiors. Incessantly teaching his little stock of prepared knowledge, weighed, measured, calibrated to the youthful mind, grown from long use second nature to him, but ever new to successive classes, knowing already all that he has to know to teach, he is liable to lose incentive to push on, to forget the sense of oppressive ignorance, which always spurs on the scholar, until his mind becomes indurated and essentially indocile. After a dozen annual repetitions of his work he grows suspicious of change, for this would involve new labor, other matter or methods, or both. It would involve a little sense of the fallibility of what he had done, and infallibility is too often the foible of the teacher temperament. He is strong in defense of his own possessions and has become thereby impotent to adopt others. Both ease, wont and routine slowly close in upon his soul and restrict the arrear of plasticity and vital growth. Once he was progressive, but he has stiffened in the mould. He is master of his own technique to such an extent that it has almost become busy work, and why should he change to new things when change involves both effort and uncertainty.

In the ideal teacher learning and giving out instruction ought to go hand in hand, and each is forever imperfect without the other, no matter how low the grade. But are teachers also students and are they not constantly prone to petty devices for reforms, and do not slight variations of their old ways seem to them revolutions?

There is a large body of text-books for every grade and department which are compilations perhaps of compilations, hovering in a kind of limbo half way between the childish comprehension and the original research of the great discoverer.

This body of knowledge is repeated in scores of tomes for generations. I have traced specific illustrations in rhetorics, geographies, English books, and even some scientific text-books, back through a dozen and sometimes nearly three dozen different authors. The writers of school text-books are a unique class of minds, hung like Mohammed's coffin between the heaven of pure science and the earth of infant minds, who have rarely studied the capacities, the nature or needs of childhood, and know little of the aspirations of the investigator who would add to the sum of human knowledge. This literature is too often the teacher's native breath and vital air. It is so copious that to know it well he has little time for anything else, and it is peculiarly calculated, with the small modicum of novelty in each author and text, to cause a sense of progress without its reality.

How remote and belated some of our texts are is far better seen in some departments than in others. What do our school geographies suggest of the modern work of the great geographical investigators? What do most normal texts on methods and the mind of man know of modern studies in these fields? It has taken this country ten or fifteen years to move on from the effete principles of Sir William Hamilton to those only a few points less effete of Herbart, so that here the good average pedagogue is more than a generation behind.

Closely connected with these is the danger of arrested mental growth to which the teacher is peculiarly exposed. Medical journals are largely devoted to the practical application of the very latest researches of the pathological laboratory, which every active physician desires and needs to know and apply for all they are worth at once. Educational journals are largely devoted to making up real or supposed arrears in the teacher's education, news, gossip, or often trivialities and even platitudes.

How many teachers read above and how many actually below their own level? In this day of enormous publication, when it never came so near being a sin to read the second best in any field, how do teachers stand? Very suggestive here is the fact that most large cities and many small ones have medical and, perhaps, law libraries, supported by the professions, where the latest and best publications can be promptly seen in convenient rooms. Where can we find in this country such a teachers' library? When we look at the book shelves in the office of a superintendent, principal, or in the sanctum of a teacher, how few of the best, and how many books branded with the mark of mediocrity and commonplace do we find. In this respect only the clerical profession falls to anywhere near the level of that of the average teacher. Indeed, one would be only a little less surprised to find a clergyman reading and using the results of the higher criticism and the latest epigraphical and archæological research than to find the teacher knowing and profiting by the best educational studies or even the new practical departures in other lands. In every city there are young teachers who pass through a period when they are flushed with enthusiasm for better things, but they are too apt to find that this work does not pay, and too soon profit by the example of indifference set them by their elders and superiors.

It is the iron law of every vocation of life that only the minimal effort actually necessary is usually put forth, and that of teaching is sheltered, protected, its members kept complacently in countenance by their associates, so that the hot struggle for existence that marks the commercial, industrial and profes-

sional world is too often toned down to ineffective good wishes and ever procrastinating resolves for the future.

Another group of morbid pedagogic symptoms that we see oftener in this country than on the continent in Europe, is loss of the fine balance that should always be maintained between imparting knowledge to the children and getting it back from them. We too often tend to lapse to mere lesson setting and hearing. Just in proportion as a teacher is poorly equipped with knowledge, he or she tends to become a mere exactor of work, takes precious time to tell pupils what to do and testing to see if they have done it.

But this is not teaching, but a device of ignorance, of laziness, or of physical weakness, or all combined. The true teacher teaches and reduces recitation to a minimum. Whoever has visted the best continental schools, or studied comparatively such international educational expositions as those at St. Louis, must have been acutely impressed with the fact that we exhibit what the pupil does, Europe what the teacher does.

Here he says, "Go, do this and prove to me that you have done it." There he says, "Come, let us study together. I know and will inform, interest, and inspire you to go on." A little more pedagogic insight would make us ashamed of many of our wretched devices to conceal, excuse or dignify our ignorance or save ourselves from work. We say let the pupil find the facts or draw the inferences for himself and then he will be better able to investigate, will remember and prize his mental possessions more. No; we should have investigated and learned to impart. To allow or even encourage callow classes to debate, discuss and weigh evidence or regurgitate the matter of the text-book, may flatter the pupils by the subtle suggestion that they can form opinions that merit the name. Instead of exercising power by their crude thoughtlets, *bombinantes in vacuo*, they are inclined to the sweet delusion that their mental emptiness is filled, and so grow complacent with their ignorance, and perhaps opinionated.

Some teachers have come to fear that the pupil in the high school is actually in danger of accumulating a mass of undigested, unsystematized knowledge, and perhaps to fancy that this peril is awful and ever impending. But have any of you ever seen a dangerous mass of knowledge in any youthful mind, unless in the memory freak? And even then are we so oblivious to the laws of mental work and growth as to fancy that such a mass of erudition could exist in the mind without being assimilated in the child's manner, or that, even if it were a vast floating plankton, that our petty artificial devices of correlating, associating and linking its parts can have any other possible effect than to prevent it from sinking deep into the

soul by keeping it on the surface against the day of examination?

The child learns to know not merely by doing, but also by hearing, and if the teacher's mind were charged to overflowing with knowledge in his own field, whether he had to tell it in the form of stories in the lower grades, or to give it in rudimentary conversational form in the higher grades, he ought to be the living text-book, known and read of every pupil, and not a mere taskmaster.

There are few more subtle balances than those between giving knowledge by and from the teacher, which is itself a passion and an inspiration, and the far lower but necessary work of finding by quizzes, recitations and examinations, whether it has found lodgment in the soul.

When mental progress is rapid, as in all great eras and epochs, content dominates form. This was true in the Renaissance, in Gothic art, in romanticism. Then comes a classic period when form and content are harmoniously welded. Later comes the stage when form dominates over content, method over matter. Thus we see that the great creative period of Jewish history ended in the wretched letter worship of the Kabbala and the Massoretic textualists. The Periclean age elapsed to that of the morosophs in the four great schools of copyists and commentators. The letter that kills takes the place of the spirit that gives life. Exactness, method, rule over matter and content. Sturm taught Latin so well that in a few years his pupils would have been at home had they been transported to ancient Rome. Now in a year and a half, four hours a week, we teach on the average less than four hundred Latin words, including those like *convenio*, to convene, *animal*, *imagino*, which carry their own English equivalents. Perhaps the most pestilent and subtle of all forms of pedagogic pathology is method cult which whips up two ounces of soap into a hogshead of foam, as a mediæval barber's apprentice must be able to do before he could become a master workman. As the principal of an Ohio normal school said, expertness in method makes knowledge less necessary. Instead of the thing itself it gives the explanation until the pupil is prompted to cry out, as a little girl did, "Oh, teacher, go on. I could understand everything you say a hundred times more if you only would n't stop to explain." Verbalism, technique, rules, definitions, notes, preciseness, accuracy,—these have their place, but very little of them for children. They give the conceit of knowledge without its substance. It is this that lies at the root of all the prejudice and suspicion, too often excessive, against normal schools and their work. It gives a tingling, then a corroding self-consciousness of every item of knowledge. It inflates facts instead of condensing them

as pedagogy should do. It makes the way of knowledge hard. It is a stone when the children cry for bread. It is the way of self-complacency and death and not the way of hunger, and a growing sense of ignorance which marks true growth in knowledge. It is a wind birth and not true parturition of the soul. It checks and blights curiosity, the divinest thing in the intellect. It brings a unique school-bred fatigue and smacks of the sad wisdom of senescence rather than of the eager hunger of young life for more and fuller knowledge.

Mass education or the grouping of children in grades, the accumulation of great numbers of them in school, the crowding of classrooms, the overgrown size of some institutions and even of colleges and universities, which makes against individuality, has brought with it a growing demand for uniformity.

This is indispensable where there must be more or less lock-step, and where classes must be trained in platoons and all personal ignorance ignored, and the efforts of education addressed to the average pupil. Association is necessary. Mass training is economic, and in a republic where all must be educated we must accept the inevitable with what complacency we can and make the best of it.

But we cannot forget that able boys are retarded, that the development in Europe during the last few years of schools for backward children, and now of schools for children with superior gifts, brings great relief and gain. The over methodic teacher probably tends to benefit most the lower half of the class.

A teacher full of knowledge and enthusiasm inevitably does best service for the upper half of the class. The aim should be to do the greatest good for the greatest amount of talent and ability, however distributed.

Along with this goes the calibration of knowledge into blocks, units, like bales of fodder; six weeks of this, twelve of that, forty lessons here, sixty there, so many times, weeks, years of preparation for college in each topic, so many experiments, uniformity of standards for promotion, for admission to college, etc. These shopworn and monotonous noetic goods, however they may appeal to girls, do not impress boys who desire something through which to vent their own individuality. Their passion is not to know the same thing that every one else knows only, but to know something that no one else knows. This is almost necessary as a sacred refuge of personality but the uniformitarians will none of it. Their methods certainly increase the ease of the teacher's work and his efficiency, but do they not obliterate something that is more valuable yet in the pupil? Must knowledge, in order to be taught to large numbers, be standardized like nails or flour, put up text-book packages, and weighed

and sold over the counter like very dry goods? All this is magnificent in a way, but it is not education, which is made of other stuff.

The school is modeled on the home and should have both male and female teachers. There is very general agreement that female teachers should predominate for the young, perhaps, up to puberty.

There is much agreement, though less unanimity, that in the earliest teens, both boys and girls need as many male as female teachers, and there is much consensus of expert, though less of popular, opinion that in the college and university grades or wherever specialties are taught, this should be mainly done by men.

All over the world, however, educational systems are now being rapidly feminized. This process has gone much further in this country, however, than any other. One writer estimates that 92 per cent. of our boys and girls satisfy the provisions of the law and leave school forever without ever having come in contact with a male teacher. This is essentially wrong.

If the process of the last fifteen years goes on our public schools will be dames' schools. No one has occasion to raise here any of the questions of the feminist, nor should the problem be, as it is essentially, merely one of economy. Nature suggests the norm.

The father has his functions with the children quite as much as the mother, different though they are, and most students of this question believe that it is, in part at least, from this disturbance of balance that so many boys fall out of the last grammar grades and especially from the high school.

I shall not attempt here, to point out in detail, as I have sought to do elsewhere, the evils that seem to inhere in this tendency, but that it deserves to be enumerated among the pathological dangers of the times I cannot doubt.

Many of the above agencies tend to precocity. This is a danger which we see most often in the only children of parents who are exceptionally solicitous for their welfare. Now that we understand its meaning, we see, alas! too many signs of it on all hands. The city of itself hastens development so that the urban is a year or two in physical and mental development ahead of the rural child. It is ever harder for us in some respects to trust nature, but the school tends more and more to invade her domain and to control and prescribe so that the child does not live out to the full all the early stages of his development as he should, and therefore his maturity is not complete and all-sided. Some have thought the school, at its best, was liable to be pernicious before the age of twelve, but the growing of modern civilization sufficiently negates this view. In this country,

however, life is harder upon youth than any other the world has known. We are unhistoric in our very mode of thought as well as in our origin. Our history does not invite to linger on the records of centuries or rich mythic story which is so germane to the soul of youth. The present absorbs and dominates everything, and our young people can hardly wait to get into active life. Nothing is esotoric or reserved for maturity or old age. The bloom is rubbed off the naïve before it is time, and positions are sought and attained before full maturity has brought strength and ripeness for efficiency in them.

We are just beginning to learn that the nature of childhood must be studied and followed, or else we are liable to do harm as well as good, that the ways of the young are very different from those of the old.

Just in proportion as this is coming to be understood we are slowly reconstructing, with the addition of many genetic elements, the methods and matter of grammar and even high school teaching, and recognizing in greater or less degree the all dominant fact that the child does, and forever must, repeat the history of the race.

A CENTRAL PEDAGOGICAL LIBRARY AND MUSEUM FOR MASSACHUSETTS.[1]

By G. Stanley Hall.

During the last few decades educational literature has not only increased enormously in volume, but the best of it has grown special and even scientific to a degree unsuspected by the public, by the average teacher, or perhaps even by most librarians. While much of the teeming product of the pedagogical press, present as well as past, is smitten with the blight of the commonplace so that it relaxes mental tone to read it, there has lately arisen a choice body of expert journals, books and monographs that tend to lift the vocation of teaching to a higher level, that has gone beyond early authorities, erected new standards and made much, that was once helpful, obsolete. Scores of academic chairs in pedagogy have been established, laborious and costly researches undertaken, reforms that have absorbed years of the best work of select intelligences at home and abroad have been accomplished, and others are under way. Opinions have been collected over wide areas. Anthropology, hygiene, psychology, sociology, architecture, legislation, finance have often brought the best that was in them to bear. Experiments costing much time, money and labor, and made on precious human material, have, some of them, settled great questions and so are worth all they cost. Thus while the old and new, conservatism and progress, good and bad, are always found in every department of life, as is needful for healthful growth, the distance between these extremes has possibly never been so great, and the worth difference, measured even in dollars, between the best and the average books, buildings, laws, methods and teachers, never so great. Hence the problem, how to make the best known and prevail so as to work against the iron law that makes everything, everywhere and always in the sphere of education, tend to degenerate to apathy, mechanism and dull routine, is vital for the rising generation, and posterity will judge ours according as we rise to this great opportunity or fall below it.

Nowhere is this problem more vital than in this State, which has long led the new world in education, and does so still in the

[1] Address before the New England Library Association, May, 1905.

number of institutions and average pay, but is now, by general consent of the competent, being steadily outstripped in most respects by the more progressive communities of the middle west. Something needs to be done in this State besides recounting triumphs of the past, devising cunning comparative statistics, pointing with pride to buildings, paper schemelets and the pedagogical apologetics now too much in vogue. Something qualitative, new and effective is needed if we are to regain our lapsing prestige in public school work. A central library and museum is one opportunity now open to us which would help the State to regain its lost leadership. Let me first hastily sketch the ideal form of such an institution.

Rooms conveniently accessible and attractive should first be secured where Boston teachers can meet socially upon school holidays and after hours, where appointments can be made and special committees meet. I will not call it a pedagogical club house, but the need of some such opportunities as a club affords has often been expressed. But the chief feature should not be the buildings or rooms, but their contents. Here should gradually be gathered a professional library and here should be found the best educational journals, American and foreign, and the choicest vocational books. I say the best, because teachers in this country are in a special need of sedulous protection from the invasion of the flood of second, third and tenth best. Those who wish to see the plans and the furniture of the best kindergarten rooms in this and other lands, or of the best American and foreign grammar and secondary buildings, with cost per cubic foot, provisions for light, heating, ventilation, coats, hats, umbrellas, toilet, desks, blackboards, yards, roof, playgrounds, modern rural schools and grounds, should find this material gathered, classified and labelled in convenient form, as expert library art can now do, so that the visitor can speedily compare the best in different towns and countries. We began this work years ago at Worcester and went far enough to find that by excisions from university reports, by correspondence, domestic and foreign, it was entirely practicable to gather and group, at trifling cost, valuable data, the chief requisite being the service of a vigorous, competent and young assistant. School architecture is slowly becoming a specialty, and here it could not only be helped along, but the level of lay intelligence elevated. Many expensive new buildings might have been greatly improved and their expense reduced by knowledge thus gathered. From this collection I would exclude models, but not working plans.

School hygiene should be represented by the best apparatus for testing moisture, pressure, regulating temperature and the amount of carbon dioxide, determining the intensity of light on

desks in different parts of the room. Here the simple apparatus used in testing eye, ear, throat, lungs, the various curvatures, the simplest kit of the school doctor, now standardized in several European lands ;— all this should be acccessible and explained to those interested, with stated demonstrations of the instruments themselves with the aid of models, cuts and diagrams. The choice little list of books and journals solely devoted to this vital aspect of school work should be grouped, and even important articles catalogued, so that a teacher who wishes either to provide additional safeguards for her own health, or that of her pupils, would find the data at hand, or if a paper was to be prepared at short notice, it should not merely repeat platitudes, but diffuse real knowledge.

Child study has many aspects, the value of some of which is now universally recognized and taught in every normal school and often in the university. This already has its little body of literature, good, indifferent and worthless, and the best is a small but precious list of both books and journals that should be gathered and catalogued by subject. Some of its apparatus and methods should be seen by every teacher and be accessible in every school, and all should be loanable for long or shorter times. Here should be exposed to view the specimen life and health books coming into use in certain European cities, and used often as a new basis of promotion as well as of individual treatment. Everything indicates that this line of work is seen to be more basal for all lines of educational endeavor, and it is in great need of some adequate material installation.

Charts and illustrative apparatus should be another department. Nothing surprises the average American teacher more than to see the wealth of diagrams and devices used in teaching in the best European schools. Our buildings often seem beautiful bodies, but these are in some sense the soul of school buildings and rooms, without which they are beautiful but lifeless things. Wall cuts of steam engines, mechanism of balloons, scientific kites and tops, illustrating all the principles of physics; devices for making geography, geology, botany and zoölogy clear and simple; historic tables for illustrations for culture stages from savagery up;—always the central topic selected, the cardinal features brought into relief, details neglected or subordinated. We do not begin to understand what pictures can do and are doing in easing and short-circuiting the ways of ingress into youthful minds, and giving body and content to teaching, which is always prone to lapse to formality. Maps, curves, colored schemes, the devices of the graphic method seen, *e. g.*, in the census, are almost a new language. Add to these the scientific toys of Germany, some of which are masterpieces of the simplification of mechanical principles, and

are also models of cheapness and of the pedagogic art that taps vital interests. The Russian, French and Belgian pedagogical museums have rooms full of these devices, and some are duplicated many fold and loaned far and near. I wish there were time to dwell upon the manifold activities of these institutions, the thousands of lantern slides, of geographic, zoölogical, historical illustrations, diagrammatic and typical schematizations of principles, facts, periods, photographs of works of art, sometimes demonstrations of material and their use, popular lectures, and sometimes model classroom exercises conducted for a chosen few.

There should also be a collection of text-books on each school topic from the primer up, new and old, always including representative books from foreign lands. To my mind the best thing of all the St. Louis educational exposition was the German text and reference books for teachers and pupils. Among these masterpieces of their kind I spent many days. This collection, not large, should have stayed in this country, been provided with a home and made a valuable nucleus. Our publishers and text-book writers very rarely compare methods of other lands but focus all their efforts on the points likely to weigh with non-expert text-book committees against the books of rival firms. I have heard of a country judge who, as he grew old, refused to hear the other side of a case lest it should confuse his mind. So these textigraphers decline to consider foreign methods because so different. The trouble with most American text-books, even those by college professors, is that they are written with very inadequate knowledge of the best pedagogic achievements of others; the author has made no comprehensive preliminary survey, largely because the material to do so has not been available.

Once more, most governments publish valuable reports annual, triennial or quinquennial, perhaps blue books giving the history and present state of great reforms like the new school board in London, the twenty years' celebration of the courses of citizenship and morals in France, the marvellous story of recent indigenous education in India, and of the school system, pronounced the best on paper, England has produced—that of Madagascar,—documents as important for other lands as Dr. Harris's report is for ours. The proceedings of congresses, of experts in special educational topics, accounts of new departures in industrial education, elaborate illustrated descriptions of new institutions, the exposition books;—all these should be collected by some one who is long-sighted enough to see what is going on in other lands.

Such an institution should give aid at a distance. Some years ago I destroyed hundreds of letters of inquiry on peda-

gogical matters, most of which I was unable to answer, but where it would have been very easy, with time and assistance, to have rendered service. There were letters of inquiry about pedagogical literature of almost every kind. Requests for references, I think, led all others. Had this or that ever been tried, and, if so, where and with what success; how can I learn about the new Scotch law, the German classical discussion since the Kaiser's Rescript in 1892, school gardens in France, the higher commercial schools of Germany, the *École du Livre* in Paris, the summary of the discussion on teaching arithmetic as ratio, reading machines, maps and charts of Bible study, the new moral and religious training methods in France, the new London board law, music in schools, a list of cities that have adopted small boards, the constitution of school boards in foreign cities; what are they doing in education in Argentina; something about the College of Preceptors; the best journal on school hygiene; what about schools for dullards, the doll congresses, the new London University, and the best school for my peculiar child; what is the Batavia system and is it unique; some literature on myopia in school children, or on tests and measurements, etc. Besides those who write many visit our library and consult its head. Now a competent librarian, specialized in pedagogy, could easily conduct a bureau of information and do consultation service personally and by correspondence, such as Mr. S. S. Green has for years done in a broader but less specialized field. This alone would widen the sphere of usefulness of such an institution and extend it to the whole State and beyond. My experience has almost led me to believe that a gifted, trained librarian in pedagogy could do a wide service, possibly greater than any other single person in the whole field of education is able to render.

This is the ideal in outline, or, at least, a segment of it. It would, of course, take years to realize and would have to be approximated gradually. Where and how to begin would depend upon many conditions. Let me briefly consider objections either actual or possible.

I. This need is already met. All who know the field know this is not true. Neither Harvard, the Boston Public, State Library, ours at Clark, the Congressional, or Library of the Bureau of Education, contain even most of the best of the books and journals. In all these places only a small fraction of the library resources can be devoted to this subject, and little expert knowledge is exercised even in selecting, and still less in making acquisitions available. Educational literature grows old and most of the contents of the alcoves in this field in the older libraries is of no value save for history. A few monumental works have outlasted their generation, but the rest are

now obsolete and dreary, and yet it is not more, but, above all, better literature, chosen from a wider point of view, that is wanted.

II. The second objection sometimes made is that such an experiment has been already tried and failed, but the two tentative efforts made in this direction in Boston years ago were both triply doomed to failure in advance, so ill chosen were the plane, plan and the man. The right selection of the latter is, of course, the most important of all. He must be familiar with, at least, French and German, be an expert in pedagogy and in knowledge of libraries. He should be a person with a distinct genius for just this work, adaptable, sympathetic, eager for the best, sympathetic with the new and the old, and young enough to think at least as much about the future as of the past.

III. The third objection is that teachers do not want and would not use such an institution. This, of course, cannot be fully known until the experiment is tried. Boston teachers are cloyed and hide-bound by opportunities for all sorts of culture,— so far more than they can absorb. They hear and attend all sorts of things, new and old, good and otherwise. They are distracted and have acquired a strange faculty of hearing every novelty, but of developing a strange immunity against infection in practice. The receptive and the effective halves of their soul are strangely divorced. The consensus of the older, dominant members of the guild is against new departures. If such an institution as I have so roughly sketched were to be given by Carnegie or to arise by magic over night, something like this would probably happen. All teachers would, of course, flock to see it, and the Boston guild would first ask Harvard its opinion and it would consult its interests. If they conferred with the leading members of your association I fancy the answer would be even more doubtful or adverse. Left to themselves the older teachers would find in such an establishment so much that would be confusing and at variance with their well-settled and habitual ideas that it would soon cause a somewhat troubled state of mind. It would probably, however, be commended with judicious and qualified terms of praise, tempered with many an "if," "but," and "perhaps," and rarely visited. A younger, ambitious, and progressive minority would soon find ready aid here for practical needs of their work, suggestions and aperçus that would give them more respect for their profession, perhaps convince a few that they could make it a permanent career. The papers and discussions by those who knew how to use its resources would grow meaty. Slowly new leaders would emerge from the average. Now and then a few would spend a summer in Europe following up

cues found here, and one or two would later take a year off and come home with a new repertory of ideas. Certain schoolrooms or departments in the city would slowly begin to stand out as superior, somewhat according as they had made connections with the new resources here opened. In time, one or two old leaders would recall with joy that they had praised the new departure at the outset and would do so with more effusion in the wondrous and benign light of the growing knowledge of success, would fancy they had foreseen at the moment of inception that an important epoch was being marked, and a surviving member or two of the State Board of the new Boston committee of five would feel the *juvabit meminisse* that the foundations of such an institution had made the day of their tenure of office illustrious.

But, jesting aside, who should take the initiative and found and support the institution? The head of a great library cannot do it for want of time, room, money, and expert knowledge. It should be a separate establishment. The teachers might do it. Lawyers and doctors have professional libraries of their own in many cities, often excellent, well supported and patronized. By this they effectively document the professional nature of their calling. Teaching, of course, should be a profession, but, measured by this standard, is not yet one. Moreover, teachers are not used to doing things for themselves. Like clergymen and all salaried classes, they wait for things to be done for them. Again, the city might do it, and possibly the new Boston board may take a large enough view of their calling to be interested. But cities usually respond to pressure and this will not arise. The same is true of the State. Legislators are more and more passive, following the lines of least resistance and most pressure, and are less and less likely, or even able, to take the initiative in statesmanship of which educational policies are the culmination. From the advisers of the legislature nothing but sage scruples and technical objections, bandying of responsibility, and voicing of average apathy and opinion are to be expected. To urge the opportunity of a great new step at the State House would, under present conditions, be useless. To undertake such an establishment in the wrong way, or to begin it too tentatively, timidly or feebly would be far worse than nothing, because it would be foredoomed at the start to failure, which would make later successes harder. Thus the only remaining hope for this State is in some rich man advised by a wise one, and here, after cherishing this ideal for years, I am beginning to fancy, although with no definite expectation, that I see a faint ray of hope. If this fails, I believe with complete assurance, with no shadow of doubt, that some such institution is certain to come, but that we in this State must resign ourselves to see it arise farther west.

CITIZENS' INITIATIVE AS A FACTOR IN EDUCATIONAL PROGRESS.[1]

By G. Stanley Hall.

While improvements in school systems may be begun at many points, the greatest need, as well as the chief leverage, is to begin with the school boards. The last twelve or fifteen years have witnessed, in this country, a new movement to reduce their size. To select twenty representative cities, the following, have nine members on the Board: Springfield, Los Angeles, Duluth, Baltimore. St. Paul, Cleveland, Memphis and Washington have seven. Kansas City and Denver have six each. Five are found in Buffalo, Toledo, Rochester, Indianapolis, Minneapolis, New Haven and now Boston. San Francisco has four, while Albany and all the cities of the second class in the State of New York have only three. Of these twenty, I have visited all but four since their reform, and have been impressed both with their general excellence, for no other twenty could be selected that are on the whole so good, and with the uniform testimony to great improvement due to reconstruction. My correspondents in these twenty cities assure me that no breath of scandal has arisen under the new system, and I am told that there is no system in the country that has enlarged its Board within a decade. This movement is spreading rapidly, and has already reached several score cities besides the above, while similar changes are under discussion in many, if not most, cities that retain the old system. Worcester's Board of twenty-four is already among the largest in the country for the size of the city.

Without exception, so far as I know, the reform has been initiated from outside the school system. It is generally a citizens' movement, and has usually been adopted only after a vigorous struggle with the representatives of the old order. Everywhere there have been the same objections, and everywhere the same triumphant answers to them.

I. The reduction in the size of the Board is called antidemocratic and the idea of many honest, well-meaning citizens is that a large Board is more like the old-fashioned town meeting and that to concentrate so much authority in a very few hands

[1]Address before the Citizens' Educational Society, Worcester, Mass., May, 1905.

seems at first a risky step. The answer to this argument, which is overwhelming, is that, if only representative men could discuss and settle all school questions in public, the larger the body the better, but large Boards everywhere break up into small committees. Boston had 29; Worcester has 11; Philadelphia had 37. No superintendent, no citizen, and even no reporter, can attend all these meetings, so they are usually in effect secret. And yet, in them all, important business is arranged, questions settled, plans matured; all trades and adjustments are pre-determined. Hence it comes that in the general meetings there is little to do but to take and record votes (I know of one single meeting in which over seventy votes were passed, after which a member told me that he knew the merits of only four questions, as that was all his committee contributed), and to talk for the benefit of the press, the constituents and the public generally; so that the true motives of measures are rarely apparent. In view of the vast sums of money expended annually for buildings, text-books, etc., and the ease with which jobbery and even corruption can be covered and individual responsibility evaded, there is constant temptation to crookedness. Thus the large Board in its actual operations is anti-democratic, and its real operations tend to become of the star chamber order.

Moreover, politics always tends to creep in. There is a general consensus that the last few decades have witnessed a general deterioration in the quality of members of the American school boards. More of them are unknown to the voters outside their own ward. It is the first step toward a political career and these little committees are particularly prone to patch and hack at old rules and multiply new ones, so that now the body of enactments governing many of our city schools under the old system, instead of being plain and simple, sometimes comprises from one to three hundred pages of printed matter and presents ambiguities even if not inconsistently hard for a lawyer to master. Under the new system committees entirely cease and everything goes before the full Board, or there are a very few committees, where everything is open. Thus it is really the old system that is radically and essentially anti-democratic.

Again, it is objected that all parties and creeds should have proportionate representation, and that the new Boards fail to secure this. This argument has great weight with partisans and religionists, but it is, if possible, more shallow and absurd than the other, for many of these new small Boards by distinct enactment must consist of representatives of each leading party and creed. San Francisco, with its Board of four, specifies that only two shall be of any one party; New Haven, with its

Board of seven, specifies that not over four shall belong to the same party; and elsewhere provision is made for securing proportionate representation of Protestants and Catholics. For myself, I would go still farther, and welcome the best men, whatever their convictions. I am a Protestant and a republican, but I would prefer to send my children to a school where all the Board were Catholics or democrats, or both, if they were the best members of these persuasions, than where they were all of my own creed and politics but the worst, or even the average representatives. Many cities have risen above these questions, and are content with the best men.

II. Effective as a reduction in size has everywhere proven, it is not enough. The superintendent must be given more power in all purely educational matters. Education is now a profession, represented by chairs in most universities and by numerous and very expensive normal schools and colleges. The superintendent should be recognized as an expert, and instead of having all his duties minutely defined and prescribed, he should be free to use all his knowledge and ability for the good of the community. To do this he must first control the appointment and removal of teachers. It is hard for the great public to learn the vast difference between good and poor teachers or to understand how the quality of the teaching corps tends to distinctly deteriorate when this initiative is in the hands of the Board. A generation ago the Boards examined even graduating classes at normal schools, and gave or withheld diplomas accordingly. The best and not the worst teachers were selected for home consumption. I know there have been superintendents who illustrate the adage, "He who depends, defends," and have upheld a usage which took from them all responsibility of appointment. It is superintendents from these new cities that have this power that are now choosing and taking away the best teachers from the schools under the old system, where it is far easier to drop a good teacher who depends upon merit for his or her place, than a poor one who cultivates "pull." Those who are inwardly conscious of their own weakness often devote themselves to cultivating influence, until it becomes almost an impossibility to drop the worst, while the best are ever harder to keep. No wonder the best superintendents gravitate to cities where they can choose their own teachers, selecting the best wherever they are to be found.

Again, the superintendent should determine not only the courses of study but the text-books. There are vast differences between good and bad ones. Some are expressly made according to an elaborate receipt designed to make them sell to the ignorant, and sometimes venial, text-book committees. More-

over, there is an innate contradiction in giving the superintendent the power to arrange the course of study and withholding the power of selecting all text-books. In some subjects the worst text can be bad beyond the power of description, while others open up topics easily and naturally, and make for mental economy and progress up to the grades, and bring out all the powers of the teacher and the pupil.

To this end, the superintendent should be selected with great care, for here, too, quality differs vastly, should be given a generous term, and also freed from the duty of educating new members of the Board each year, attending committee meetings, sitting on the anxious seat, and feeling himself essentially a servant liable, at least annually, to be discharged with or without cause.

III. A third reform, which has often—not always—gone with the preceding, but always should, is the separation of the business from the professional management of the schools. The erection of buildings, all changes in them, or grounds, the purchase of supplies, etc., should be in the hands of a trained business man, who should be on terms of friendly co-operation with the superintendent, but accountable to the Board. Various devices have been adopted to secure the management of school business upon the same principles which are recognized in private business. I have visited various cities where, within a decade or less, a judicious system of locations for new buildings, and a sensible plan of their construction, a great improvement on preceding schemes, has also resulted in very great economy. Sometimes where members of the Board undertake this work, they receive a salary. This has given rise to the objection that the new system is expensive. The contrary, however, is the case. The city of Rochester, which has now an admirable system, actually turned back into the treasury the first year after the new scheme went into operation, $81,000. While such a per cent. of saving is exceptional, increased economy is the rule. Even in those cases where the budget is not reduced, far better service of every kind is obtained for the money. And this is true economy. It is precisely here that, in some cities, the rub has come, for this involves the abolition of favoritism, jobbery, and pulls, in all the matters involving contracts for material and labor, and secures the holding of each contractor and workman to his work by daily and detailed supervision. The difference between the methods of constructing schools and constructing dwellings and business houses, by those who own and occupy them, is great.

IV. Another reform that has often been found very helpful is a special election for the school board; sometimes a separate day, and sometimes only another polling place near by, or per-

haps in the same room but under independent control. This factor seems to work well, but has hardly been tried sufficiently yet to reveal all its possibilities. Every degree of separation in space or in time tends to divorce education from politics and bring to the polls those most interested in school matters. In some communities women are allowed to vote for school officers, and so far this seems to have worked well. A separate election, however, such as now prevails in Indianapolis, Colorado, and elsewhere, is at least a promising experiment.

Closely connected with this is the separation of the school board from the city government. Where educational matters are controlled by one body and the financial support of schools by another, all kinds of friction and even abuse creep in: as in a large city recently, where school supplies were diverted by the council and instead of shortening the school year, as has sometimes been done, children were massed sixty in a room and many teachers released early in the year in order to avoid a deficit.

Now no one of these improvements is sufficient of itself to insure real effectiveness, for great is the influence of lust of office and power, and often of spoils. There is no more clear and certain lesson from the whole history of education than that it always and everywhere tends by an iron law to degenerate in quality. I cannot think of a single great reform that has ever been effected where the initiative and the carrying out of it sprang from within the system itself. The great reformers have for the most part been philanthropists, patriots, or at any rate, not plain teachers by vocation. Thus such a function as your body seeks to exercise is essential. There are American cities to-day in which the Woman's Clubs have abandoned every other function except that of improving the public schools, and in some cases they have effected very great and beneficent changes:— introduced the kindergarten; broadened the scope of manual and industrial training; improved the grounds; decorated the walls of the schoolrooms with works of art, sometimes quite costly; secured the nomination of good men or women on the Board; improved hygienic arrangements; aroused public sentiment; rallied and organized the parents to meet weekly or monthly in every school building; improved evening schools; introduced nature study, etc.

These methods are all in the direction of simplification and increased directness. Everything is open to the public and to the press. It is the introduction of plain business common sense, and wherever introduced, has behind it the intelligence of the community and arouses local pride and new public interest in the school. It is supported by every argument that is slowly working out municipal reforms in cities like St. Louis, Chicago and Philadelphia. It always brings excellent, if not the very

best, talent and experience in the community into the service of the schools, and is certain to prevail just as soon as parents understand their own interests and those of their children.

Finally, the best answer to the question, what your society can do, is found in the statement of what other societies have done. Some of them have committees on the work of similar societies elsewhere, to bring before the members promptly knowledge of every new departure. Perhaps they send delegates to visit these societies and to attend and report their meetings. Some of them have central meetings to compare notes with delegates from other similar societies. What has been accomplished in Brookline, Brooklyn, Philadelphia and elsewhere is certainly surprising. Again, lecture committees provide courses each season, sometimes by specialists in education and science, art, etc., and sometimes lectures with the stereopticon for school children. Others have committees on the relations of the work of the society to the community, whose duty it is to interest the press and supply them with information and to canvass for membership. Others have playground committees that consider the needs of municipal gymnasia, improve, enlarge or extend facilities for playing in the school grounds, and on roofs, erect sheds for gymnastics in bad weather, etc. Art committees do several different things in different places. They collect pictures, photographs, mount and group them, cutting from weeklies and monthlies, for which they advertise, and arrange them so as to illustrate themes in history, art, nature study, literature, biography, geology, botany, etc. Sometimes these portfolios are circulated in the children's reading room of the library, and teachers can indicate the class of pictures they desire. I have seen one school that, as a result of some years of work by teachers and friends, had, I should say, six or eight thousand pictures, arranged to supplement the work of the school. Again, art committees solicit subscriptions for pictures, photographs, prints, drawings and statuary for the schoolrooms. Even loan exhibitions have been conducted by these committees for the benefit of the schools and perhaps in the high school hall. A permanent museum of industrial art or children's productions on paper and wood, etc., has been established in at least one city. History committees devise means for interesting both parents and pupils in local history, and perhaps print pamphlets outlining the history of the town and its vicinity and suggesting historic excursions, collecting slides, and sometimes even new material has been gathered, old sites marked and literature listed. This has stimulated local pride. Science committees suggest topics, often of local interest,—water sheds, native flowers, birds, trees, animals; study the telephone, fire, electric car service, ventilation, hygiene or astronomy; print charts of local

objects of scientific interest; collect scientific toys and pictures; conduct popular lectures with experiments; and have also occasionally contributed apparatus. Physical and manual training committees have investigated conditions in schoolrooms, interested physicians to gather data, made recommendations for hygienic improvements, reports on the state of athletics, brought experts to lecture on manual training, and gathered educational suggestions for such courses from the people and the industries of the town, etc. Other committees have devoted themselves to the study and help of boys' clubs and perhaps started new ones, assisting them in the way of procuring quarters and in useful expenditures of their energies in debate, etc. Mothers' meetings have been arranged in the schoolroom where teachers and others were present, and practical topics like children's dress, lunches, home duties, toilet, health, etc., were discussed. Occasionally special studies of children have been instigated by these committees.

I find that there have been committees or lectures or courses under their auspices on the reading of children, home study, recreation, music, the relations to the public library, story-telling, the flora and the fauna of the region, etc. The object throughout is to bring the parents and the school and teachers nearer together, to create intelligent interest in the welfare of the school, to inform the public as to present theories and practices and thus create a sound public opinion. Social meetings are often held. The essential feature of these associations always is work, which is largely done by standing committees continued from year to year for specific ends.

If this society is to accomplish results, it seems to me it should address itself to a definite programme of work, with definite goals. Merely to edify and instruct each other, or even to inform the community is well, but I think the programme of all other societies of this kind, that I know, is more definite and involves much more work. But it must not be forgotten that your work is just beginning. Your ends and purposes are the best things in the field of public education that have come to this city since my residence here. May you have the wisdom and energy in the face of the great work before you, so sorely needed here, to push on to complete success.

THE EFFICIENCY OF THE RELIGIOUS WORK OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION.[1]

By G. Stanley Hall.

Nearly twenty-five years ago a school superintendent in one of the largest eastern cities said at a teachers' meeting that after some twenty years in office his system, while, of course, not absolutely perfect, was now so near it that he was disposed to challenge any one to point out a real defect or essential improvement needed in it. Then several of his principals and friends arose in turn, praised him and modestly praised each other and themselves, contrasted the present with the past to show the marvellous recent progress. I had spent a week inspecting their schools and when asked for my word was young, foolish and conceited enough to suggest a few respects in which I thought we might profit from European schools which I had just visited, and even added that sometimes those who thought themselves already perfect never became so, that all things human that ceased to advance had already begun to decline. During the next forty minutes I learned very fast and much;—that no outsider could really learn anything about their work in a week that could count against those who had spent their life at it; that I was in danger of being counted an enemy to education; that it was perilous to criticise the public schools in public because their efficiency depended upon the good will and support of tax payers; that our school system was the biggest in the world; was American and *sui generis;* was already in advance of Europe from which it had nothing more to learn; that psychology was an academic thing and had no practical lessons for pedagogy.

This experience may in part explain my reluctance, which Mr. Pierce will remember, to accept the invitation with which I was honored, and in the free criticism which I shall make bold to offer, it helps to fill the background of my mind with doubts and diffidence about the validity of it all. Lotze said that to be praised in good taste just to the saturation point is the most exquisite sensation life can afford but also one of the most dangerous. You deserve so much that perhaps you have had too much and want and need a change by way of a new sen-

[1]Address before the International Meeting of the Y. M. C. A., at Niagara Falls, May, 1905.

sation for very surfeit. This magnificent new step in trying to see yourselves as others see you by inviting outside but friendly men to suggest and even criticise, should mark an epoch and set an example for other organizations both religious and secular. To-day, at least, you do not seek eulogy or advertisement of your merits but your purpose is more akin to that of the great manufacturing plants which occasionally invite university experts in chemistry and physics to look over their processes and machinery to see if from their different standpoint they can suggest modifications that would make for greater economy and efficiency. So queerly perverse is human nature that, just as when asked to praise as above I felt impelled to blame, now the very candor of your request tends to disarm criticism and win the good will that would prefer to lavish praise till, however voracious your appetite might be, you would be sated and cloyed.

I love and honor this association because it marked practically the first recognition in Christendom of the true meaning and value of youth. In every known race and nation, religion is brought home to young people in the teens by formal initiation ceremonies, confirmation rites and conversion, which is most frequent at that age. Your work begins at the pubertal epoch when religion is rather suddenly and, more than at any other time of life needed against the flood of new temptations that now beset the young man, and when true piety can be purest and deepest. To this age Jesus stands closest and appeals most strongly. He comes to young men as to no others. His message of love to God and man gives the strongest passion in the soul, the one most prone to grovel, its most worthy object. Women, childhood and old age are by nature a little less near to him. Boyhood has not yet attained, so do not let down your age limit too low. Old age is conservative, unprogressive, so keep your membership young, for youth is the light, soul and hope of the world.

The inception of your association marked a momentous new step and it has inspired and set fashions for many more which, though called by other names, are really your children. Indeed, your founders perhaps builded more wisely than they knew, and science has lately been enriched by confirmations of their discovery that adolescence and Jesus are each the key to and the revealer of the true nature of the other. I knew and worked a little with MacBirney in his prime, when the pure culture of personal piety was relatively a far larger part of your activities than it is now. You should not let the strong, short circuit current between the individual soul and Jesus be weakened by the multiplication of long circuit activities. My inquiries show that you give now relatively less time and energy

than formerly to the study of the scriptures, to hymns, to cultivating private relation and communion with God as your social efficiency increases. Do not lapse to an ethical club nor to an association for philanthropic work only with young men, excellent as this is.

I. This brings me to my first point,—Bible study. I have collected and spent much time in perusing your text-books on the scriptures, and while they differ much in merit—and some I should fear might actually impair interest—I have found none that seemed to me up to the standards in either pedagogic methods or modern scholarship. The most obvious parables are sometimes tediously explained. In one, miracles were all treated by the same monotonous rubrics,—time, place, circumstances, manner, words, effect on the object of it, on Jesus, on the disciples, and on the multitude. Cross references are adduced to show that a miracle means a wondrous, mighty work; that the people marvelled and were amazed. One gives a page each to each of the seven days of twenty-six weeks, 132 in all.

The appeal to the devotional interest is incessant. Written prayers are inserted which it is stated, are "not necessarily connected with the subject of the day's study." "What did he say next?" "Who came?" "How many times is the word 'straightway' used?" "What is the meaning of 'beside himself,' 'laid hold of him,' 'friends?'" "Who was Jesus' mother?" "What was Simon's other name?" are fair samples taken at random. Sometimes the answers are printed after the question, and for some the pupil has but to glance at the Bible before him. One text-book of a very different kind always leads up to personal questions each of which must be prayed over and answered in writing, such as "Am I a saving force?" "Do I love my enemies?" "Is my eye single?" "Have I lost my life for Christ?" "How did Jesus dress, and how do I?" "Am I ready?" "Do I follow afar?" "What do I lack?" "What is my answer to the question 'Lovest thou me?'" In another book of thirty lessons for thirty weeks the air is freer and the poetic and other quotations better, the sentiment broader and deeper and more wholesome, there are more indications of scholarship and less that is trivial and commonplace; but the focal questions are such as "What is discipleship?" "What kind of a son ought a father like God to have?" "Summarize the evidences that Jesus was interested in man." I wonder if Jesus would have taught in this way or does this suggest the pedagogy of scribes and Pharisees or the worst busy work traditions of the uniform lesson age of the Sabbath school now happily improving?

In this work, I think that every one familiar with the principles of modern education would say that, first, the intellectual side

should be made more meaty and deal with more essential and less incidental matters. The view should be broader and more conspective and perspective. An apparatus of maps, large and small, showing travels, historic ages, tables of dates, rulers, contemporary events, genealogies, photographs of travel, excavations, especially the many free reconstructions which go beyond literal scholarship, and perhaps sacrifice some of its ideals a little for edification, a choice little religious library of a few of the best lives of Christ from different points of view, a good harmony, Bible dictionary, perhaps the polychrome Bible, and some one to demonstrate this material and bring in occasionally a large general atmosphere of scholarship and protect youth from the deluge of second and third best literature with which the deluge of printer's ink now threatens to overwhelm the world, despite the bow of promise set in the heavens of old; —these are now perfectly feasible and could be curriculized into unity. Secondly, while youth normally resents direct invasion into the aditum of its sacred religious life and feeling, it craves indirect and suggestive help. Therefore, without entirely abandoning the aggressive personal method of the revivalist, which often does great good, I would add the æsthetic, indirect appeal of Christian art with its boundless wealth of photographs of masterpieces. Almost from the Christian era to recent times the Bible is near the centre or art history. There are a few pictures of Jesus' face that cost from one cent to one dollar and that appeal to some youth as no sermon can. Their moral strikes in of itself while all attempts to rub it in would fail. The Passion Play, Parsifal, Ben Hur, oratorios, other good sacred music, poetry and hymns, would help us to reach the very highest in the intellect and the deepest in the heart, which we must do to transform life. We want neither the higher criticism nor the details and minute exactness of the professor's erudition to teach the main springs of edification. We do now know enough of the nature of youth, of the modes of reaching it and the materials are at hand, so that we only need a wise purveyor who can command these new resources. If we would systematically abandon the worst literature now in the field and progressively cultivate something new and better, the Bible work of the association would languish less.

II. Later, in the closest and most vital relation to this should come teaching in morals. Once this was thought unnecessary, and Mark Hopkins was told by his predecessor that ethics was a form of paganism needless now that saving grace could do its work quicker and better. I am not pleading for academic ethics. When, after the war of 1870, education was laicized in France, it was found that children were growing up without

knowledge enough of the Bible to understand common literary allusions, just as half a dozen censuses show, is progressively the case now in this country where, on the whole, despite all our efforts, the children in grammar and high schools know less and less of the Bible. Therefore, the French government provided that ethics should be taught concretely by massing examples of heroic deeds in history and literature, by proverbs, maxims, civic and patriotic precepts, and by appeals to the sentiment of honor which, although so often perverted, is perhaps on the whole, the very strongest of all the bases of moral appeal in the young. Desjardins, Lavisse, and others took the movement into the university on the basis of a few fundamental principles which all could accept. I wish there were time to describe here the results of that work as set forth in the celebration of its twentieth anniversary just held. In England, and in this country Gould, Sheldon, Hyde, Sutherland and others have suggested what may be done along these and different lines, and there are already spasmodic illustrations of new and better things. Some begin with body keeping and tap the ever gushing springs of athletic interest. Dr. Seerley, of Springfield, confers personally with all who wish it, as nearly every young man does, concerning sex, and sometimes, gleaning in the wake of a powerful revival, saves souls it left untouched. Between love, procreation and religion God and nature have established the closest bonds, and, in my experience, and observation there is no topic in the world that strikes and holds young men like plain instruction by a healthy Christian physician who has the heaven-born gift of beginning with the flesh and mounting the Platonic ladder of eroticism, till the greatest passion in the human soul is fixed upon its loftiest object. God's covenant with Abraham, which is the fount and source of both the Jewish and Christian dispensation, was that his seed should be like the stars of heaven in number if he was true to Jehovah and his own nature, and neither love nor religion are themselves complete or completely taught without the other. Sex is one of the most illuminating of all revelations, a centre of apperception for moral and religious truth, and beside the ravages of real evils and the often still greater and more tragic ones arising from the baseless fears to which it still more often gives rise, cigarettes, swear words, petty crimes, and most other adolescent sins, sink into insignificance. Every Young Men's Christian Association in the land should have some carefully chosen man to talk wisely and well in public meetings, and who should be accessible for personal conferences to save youth from the vile quacks that flaunt their seductive and alarming advertisements and fatten on the life blood of hundreds of thousands of our young men; for errors either real

or fancied here are the chief obstacles in the soul to a true religion which is so essentially a part of the very nature of youth that he who grows up through the teens and twenties without it in his heart is either abnormal or a victim of our well meant, but imperfect, methods. Is there any institution which should feel this obligation so near and imperative as yours, and should you not hasten to lead the world to new and better ways in meeting this evil?

III. There is one class of young men, mostly though not all college and university students, which your methods do not reach at all, but repel, but whose allegiance is left cold and ineffective. My inquiries among college faculties and students suggest that your association, while doing immense good, has tended to segregate religion within the walls of its own buildings or rooms. I am told that both class and college prayer meetings have declined; that college sentiment regards religious and sometimes moral work as rather your specialty; that your own members are less disposed to talk, pray and work themselves, but rely more upon clergymen, professionals or agents to conduct meetings and to do this work; that, following the law of everything else, religious work is becoming a specialty.

From the university, the reports show that graduate students who are church members are prone to ignore the association and allow its distinctive work to languish. A few of the franker ones confess that the old, old story palls a little. Social work may flourish and each new preacher on the annual list attracts, but prayer meetings, personal work and Bible classes are neglected, and the chief interest is intellectual and found in the discussions of the classroom on ethics, philosophy, ultimate problems of evolution, the constitution of matter, sanctions the virtue, freedom, reality, purpose, etc. In one graduate school where three-fifths were church members, three attempts were made to start a university association and each failed. The feeling was expressed that the pulpit is conditioned by the theological school, and that that is behind the times. One bright doctor of philosophy says that while physicians eagerly watch the latest discoveries in medicine, take journals, have city libraries, and vie with each other in applying the results of the newest investigations, it is not so with religious teachers. They have no professional libraries even in large cities, and the journals they read report little of new researches on the frontier of knowledge and are not in touch with advanced scholarship, because neither churches nor individual competition demands it. One was deeply moved by Harnack and asked the college association agent what he thought of it, but he had never read it. A philosophical student said in an association prayer meet-

ing that he had found much help in Starbuck, Coe, James, and Leuba but the leader feared that these fostered pride of intellect, and insisted that religion was a matter of the heart. Another requested the purchase of Sabatier for the association reading room but duplicates of certain authorized books of the asssociation, — Sharman, Bosworth and Salmon — were bought instead. The students of Berlin are not called religious, but for years they have thronged no course as they did that of Harnack, since reprinted in his "Essence of Christianity." Cornill's Frankfort lectures on the prophets of Israel, outlining the revolutionary results of Old Testament studies that began in Wellhausen's "History of Israel" in 1878, and describing the work of Kuenen, Duhm, Stade, Smend and others, were crowded by students and educated laymen. When Haupt spoke in Baltimore on Ecclesiastes and Job and told of his work on the polychrome Bible, he attracted about the best audience the University and the city could afford. I am told that Harvard never saw a better audience than that which listened to Osler two years ago on immortality. At Dartmouth, a very successful new movement of opening to students the new Bible as re-revealed by the new scholarship is well launched. I have developed in the last few years a brief course on "The Psychology of Jesus," which is extremely imperfect, and, if it has any merit at all, consists solely in epitomizing new studies, which, although it does not count on examinations, despite its incompleteness, has attracted, I think, more interest than any course I ever gave. Our lectures by docents on religious pathology, the psychology of the sects, the great ethnic religions, and another on Confucianism, teach the same lesson.

From these instances, which might be greatly multiplied, the one ineluctable inference is that zest for such subjects in the university is strong and deep and that there is a new wave of interest in this direction, a demand not yet met, indicating a slow, but widespread and general, intellectual awakening of desire to know the latest and the best. Why have we failed to feed it? Is it ignorance, indifference or suspicion of the free and higher neo-Christianity, the dawn of which is already illuminating the heights? There are still too many of your secretaries who are too narrow and too prejudiced against new movements to do all that they could and should do in their position. We must welcome and bring the best home esoterically if need be, or else abandon and be abandoned by the elete young minds, and be content to work on the lower plane of culture. You have special missions for railroad men, travelling salesmen, clerks, etc. Why not add one for this class? You have helped to make religion a specialty in the college. Should you ot now help to make it a more respected and attractive spe-

cialty? Careful censuses in this country and Europe show that many of our most thoughtful and educated young men with strong religious instincts doubt, for a time and perhaps permanently, the fact of the resurrection miracles and even immortality, as witness the reports of Leuba and Schiller. Why ignore these facts? These are the men among whom teachers in my department spend their lives. Do you help them, and do you help us by your sympathy to help them?

One prime condition of doing so is to develop a perspective that does not see everything in the Bible and church in one plane or level. The slogan, "all or nothing," has in the past led many a youth to renounce all religion. Once it took the form, "If I were convinced that the whale did not swallow Jonah, or that Joshua did not stop the sun, I would abandon all." We have already passed beyond that. We admit that there are shallows as well as depths in scripture. We edit it in selections, and few claim the old absolute inerrancy and uniform inspiration for every part. Now, however, it takes a different form. If a young man cannot accept the reanimation of Lazarus, or the divinity, physical resurrection and ascension of Jesus, or a conscious personal immortality, or the personality of God, which so many an ingenuous youth stumbles at, he too often feels and is felt by others to be an alien, if not an enemy. Here is where we need a new perspective. Is the heart and soul of Christianity lost if all these are gone, or may there yet be left after these negations something quite as vital or more so? This is no question for the dogmatic theologian, but for the psychologist and the religious pedagogue. I believe these great affirmations with all my heart, but in my own way which is far from that of the creed-makers I insist that without any of them there may be yet enough that is precious left to be the basis of a piety that is vital, saving and Christian. Profound as these truths are, there are yet more abysmal depths in the soul of man and in religion.

The ultimate quintessence of Christianity is supreme love of God, however defined, whether as a person or as pantheistic, or a power that makes for righteousness, and love to man as man, however conditioned. Jesus stands for the generized type of man, the ideal of our race, the biological *genus homo*, as God or nature intended him. His transcendent genius enabled him to reduce life to its simplest and most essential terms. He inwardized all rites and beliefs, reduced them to subjective forms, translated Hebrew history, law and ceremonial into psychic principles. His cry was that there is no past or future or remote in space, but everything is here and now. All prophecy is fulfilled in his generic soul. He looked the universe in the face with a normal, and therefore filial, feeling which evolution

only re-enforces. No soul was ever so sane. His consciousness and life is what man's will some day become if the race advances to the true goal of human evolution. Thus he is the super-man and beckons us to the goal, points out our vocation as human beings. Full knowledge of his mind would be the only complete normal psychology. His pedagogy is normative. His personality was so healthful, majestic and impressive that it brought courage and infected the sick with health and wholeness and the faint-hearted with resolution. Were it now suddenly provable that he had never lived at all but was the slow and consummate evolution of a folk soul, its greatest projection and work of unconscious art, his very ideal would stand for the highest worths and values, of which, since Ritschl, we hear so much, organized and made effective for virtue. Perhaps it is a new argument for Christianity that these rising floods of doubt cannot kill it in the soul. Scripture is the world's great text-book in psychlogy and the new and higher dispensation of Christian truth now dawning and laying the foundations of a new orthodoxy of its own, as much beyond the higher criticism and the philosophies of religion from Spinoza to Pfleiderer and Höffding, as these are beyond the crass and the literal dogmatism of the Puritan faith. The ideals of young men are proverbially the best material for prophecy, and should you not lead the church and the divinity school and not fall behind them in the attempt to minister to just this one class and age, to help which is the noblest of all forms of human service and is your own special work. Let the accredited and conservative guardians of Zion revise and approve all your other work, but if you help this class of men you will have to do it esoterically and independently. This is quite distinct from taking your spirit and meetings to shops and stores and from the lectures in your own rooms, for it is qualitative rather than quantitative, and for a special class, small but very important. Sometimes gains in quality are even more precious than those in numbers, though to some this is a hard lesson.

Again, if you would judge the level of a profession, examine its training schools, for fountains rise no higher than their source. You have great reason to be proud of yours at Springfield and Chicago. I could speak at length of their merits and achievements, but they lack two things:—first, endowment to place their work on a secure basis and to widen its scope, and secondly, academic association. The Springfield school should be moved to some strong university,—not to a theological school, and the Chicago one closely affiliated. Some of you know of the federation movement in higher education. Very valuable professional and denominational schools have sold their property, moved and rebuilt near universities so as to

concentrate all their teaching upon the professional part of their course, and to give the students access to all the general academic courses, and to enable them to breathe a freer, ampler air of culture. The time has come for you to profit by these examples. Some of your secretaries do not know just how to establish the right *modus vivendi* with the university men in their community. They are a little fearful of their criticism or a trifle suspicious of their safeness. Many of them prefer the aid of the more sensational to that of the more solid and cultivated clergymen in town. Their success outside the membership of the churches and their community is often limited by the fact that their own associations have been so limited by the ecclesiastical boundaries. At some of your largest meetings a standing test shows that less than one-tenth present had not already settled church associations.

Again, I wonder what would be the effect of inviting here and there a broad-minded Catholic priest and Jewish rabbi or ethical-culturist in your communities to conduct services of their own, to which their own following should be invited in your rooms, stipulating only that criticism of others' views should be avoided. Would it not be a step of wisdom as well as of tolerance? Colleges invite these men to their pulpits with good results. Catholics and Jews are found in the faculties and largely represented among our college students. All Catholics are fellow Christians; all Jews believe in morality and in the Old Testament, which they usually know better than we. Why not extend your interdenominational character one step further? Here and there, too, if there were a demand for it, and if just the right man offered, I would invite a Buddhist, a Brahman, a Confucian, and if there were a call, as would very rarely be the case, I would open a school and conduct a class in comparative religions. We must overcome all narrowness, limitations, prejudice, and realize that the largest question in the world to-day arrays all religions together against the crass materialism of an industrial and money-hunting age. Better a good Buddhist, or pagan of any kind, than a bad Christian.

Finally, do not both your hymns and your music need attention by a committee who know the resources of hymnology and sacred music? Andrew D. White, who was an evangelical Christian, says in his recent Autobiography that your sentiment is "gushy;" that whereas you used to sing of God's majesty and of standing firm in faith as on a rock, now you prefer to whine

> "Oft it causes anxious thought,
> Do I love the Lord or no?
> Am I his or am I not?"

as if it were a matter of daily weather lore. Should there not

be more music and song, better in quality, and in which all can take part? One of the great evangelizing powers in Christian history has been the magic charm of cadence and rhythm which, where the head is weak or intelligence reluctant, wins by a flank movement that seizes the heart. My informers say that you sing less, know less good music and hymns, and have less opportunity to enjoy singing what is known than formerly. You know better than I whether this is true. There are a few men in the country now who know the history of hymnology and sacred music, and can, not only lecture, but illustrate. Should you not keep these men very busy?

Your general growth has been remarkable. Within the last few months I have, unknown, visited many associations and made many personal inquiries. Your secretaries and assistants are gentlemen and men of the world in the best sense, have shown me about and answered my questions often with the greatest patience and intelligence. No one has suddenly turned upon me with the question which should be always pertinent, but which has often been so tactlessly introduced, to ask me if I loved Jesus or was a saved man. You have billiards and pool, games, gymnastic dancing, soft drinks, swimming pools, reading rooms, current topics, debates, exhibits, excursions; you hold meetings in shops, are doing noble work in the army and navy and among street railway men, have classes, lectures, contests galore; your athletic work has of late grown faster than that of the colleges and high schools; you have splendid buildings; your year book shows bewildering activities; but are you not doing too many things? Other organizations have multiplied very rapidly. Do you always respect their fields? You do not proselyte. Do you help other agencies to do their work? Are the criticisms that the church often makes that you interfere with their work ever justified? You know the fate of the secretary who cannot show increase each year by merely numerical standards. What of other qualitative and more immeasurable tests? Machinery, over-organization, too much control and authority, specialization that relieves the individual of his own responsibility, are dangers peculiar to all organizations, especially in this country where some things are organized to death. Utilize all the talent in the community, but tsick to young men. Let the many other agencies now found in every community look chiefly after boys. Have you not too many old men past the dead line in places of authority? I would not, like my former colleague, Osler, chloroform men of sixty, but should you not consider an age limit? Most of the world's work is done by men under forty, or at least under fifty, and very many in religion are old, stagnant and sterile in soul even younger. We all revere old age and its wisdom,

but there surely is some danger in some fields from dead men who are not yet buried. It is one of the ruling passions till death in us oldsters to give advice and also to control. Indulge us in the former occasionally but you have attained your majority and should indulge your own instinct which is one of the most cherished prerogatives and strongest passions in the young to resist our authority, to stand erect on your own feet; to free yourselves from the conservatism of men of the past; to look about you to the horizon on all sides and light your own way in the world; to learn to profit even by your errors, for thus the best things in that best of all schools of experience are learned. You are not true and complete adolescents unless and until you defy and refute by practical demonstration all the timid apprehensions of graybeards and push on into the infinite future where all the best things yet lie, for they have not happened yet and are therefore not found in history. Thus only by adhering to your own peculiar task will you be able to realize to the full the brilliant promise of your development thus far; you cannot go wrong and great new things are before you if you are faithful to your watchword, which should be, "Jesus for young men and young men for Jesus."

THE EDUCATION OF MINISTERS, AND SUNDAY SCHOOL WORK AMONG THE UNITARIANS.[1]

By G. Stanley Hall.

The one thousand million people alive on the earth to-day are but a small handful compared with those who have died, and we must believe that they are a yet smaller handful compared with those yet to be born. We present tenants of the globe are but one link in the endless chain of generations, a tiny point of contact between two great clouds of witnesses, the one in the past, the other in the future. China turns backward and worships ancestors, realizing that what is good in and about us of to-day is due to their health, virtue and self-sacrifice. But the new genetic ethics and psychology, if it be not better called the new religion, not yet represented in any academic chair or organized church, but just in the morning twilight of which it is our thrice-blessed privilege to live, turns to future generations and finds in them the object of supreme regard, service, and reverence. It would live and die subordinating all that we are and can do in mind, body or estate to the betterment of the great majority yet to arrive. Thus we are of real account in the world only so far as we help posterity to an higher vantage ground. The ultimate criterion by which to judge every individual and institution is what it does to favor the bringing forth of the most and best citizens of the new kingdom or republic of man that is to be, and, second only to that, what it does to bring each member of the next generation, when born, to the fullest and most all-sided maturity of which he is capable. Everything is bad and wrong that tends to multiply, mature or give power to the worst stirps and specimens of the race. Thus to all our present-day problems of politics, finance, trade, colonization, criticism, municipal administration, charity, sects,—to every question in short, we find the right solution to be that which is in the interests of the multitudes to whom we transmit the sacred torch of life. How to do this most effectively and also how to supplement nature by nurture, is thus the supreme problem to which all these and all others are ancillary, and which invests them all with new and higher interest.

This simplifies both creed and life. As a creed it gives a

[1]Address delivered in September, 1905, before the Unitarian Conference at Atlantic City.

sane and poised intellectual unity and a belief by which we can abide, a major premise from which we can with least effort think our way out in all directions. Recognizing that the most precious of all wealths and worths is heredity, it sees also that the highest test of every human institution is its race educational value. It postulates harmony between the logos of science and philosophy and the biologos or spirit of life that is ever weaving new and more subtle textures on the loom of time. This, too, is the basis on which the Platonic philosophy tried to reconstruct society, but it was Jehovah, the personified genius of the Jewish stirp, who laid the corner-stone of our faith in the covenant with Abraham that just in proportion as he lived true to God and nature would his seed come to rival the stars of heaven in multitude, and the transcendent work of Jesus was in regenerating love, the greatest thing in the world and the fount of life. Heredity is a fixed quantum and the goal of study and research, the sum of duties and the chief end of man is to make the most and best of it, to economize and minimize wastage and prevent decadence. He is the sagest who judges even minor problems in its light and he is personally most virtuous whose life most conforms to its interests and he the greatest servant of mankind who makes the world materially, intellectually and morally fitter for those who shall crowd and over-crowd the earth when we have joined the other great majority of the past.

What then is the chief danger of *our* race and age? It is over-individuation to a point at which it interferes with genesis. It is so easy to rob posterity by consuming in personal development, enjoyment and effort the life energy meant for future generations, to over-cultivate and refine ourselves to be magnificent men and women at the cost of parenthood. This taking out of life more than it can bear is the quintessence of selfishness, which is sin. Up to a certain point we do most for our children in doing most for ourselves, but the subtle line where this ratio becomes inverse and we over-work and over-develop self at the expense of offspring is always present somewhere, although it is drawn very differently for different individuals and races; but to find this line and live exactly on it means racial and family advance, and to deviate from it either way brings the subtle stigmata of degeneration and ultimate extinction. We are not the last or the best on earth and it is cosmic provincialism to train only for service to and in the world as it now is, as if each generation were a fac-simile of that which preceded. The élite few pioneers and prophets of this neo-Christianity already proclaim a service that is a fiery passion that would consume self as fuel—yes, would be dung to fertilize the new life, just as the soma is subordinated to the immortal germ plasm. Now that we see that Darwin was only the John the Baptist of the higher

evolution that shows the soul no less than the body to be a product of development, can we regard spending and being spent, living for the children as the only objects worthy of love, self-sacrifice and devotion, in its true perspective.

Is there any better standard by which to judge religious bodies than efficiency for the future, the power of which has inspired every great new religious movement? It was a splendid galaxy of men that created Unitarianism as a new and higher story of Protestantism, a movement which in itself, and perhaps yet more in what it stimulated, is the greatest religious achievement of this country. Channing, Emerson, Parker and the rest built a new altar to the Holy Ghost, higher above the fogs of superstition than any other, and multitudes who never read their pages are larger, more truly pious and virtuous than they could have been without their work. It has lifted the level of all denominations but while we continue to pray in the name of Channing and with our faces steadfastly turned toward the Mecca of Boston and Cambridge, other oracles have spoken, and both scholarship and enlightenment quite as great are found elsewhere. Complacency in past achievement and a just sense of present attainment, wealth, respectability, general culture,—all these may exist without the one thing needful. Judged by the standards of numerical increase of congregations, of the proportion of young people found there, the quality and number of those pressing into the ministry, the relative attendance to, and success in, the Sunday School and in adjusting to the nature and needs of adolescence and of childhood there, do we not show sure signs of indifference, disrespect, and may I even add contempt for the future in our smug complacency with the past and present?

What are, then, the present duties which due regard for the future demands? I shall name but two,—that to the professional and that to the Sunday School. When the scientific method was first applied in the religious field it had a prodigious work of clearing up and cleaning out of the Aberglaube deposited through centuries. Criticism, long continued, favors a kind of diathesis of negation in which the just balance between destructive and constructive work is lost. It should, however, be pushed to the uttermost and will go on. Even Unitarianism is being shown to have paused half way. Perhaps all that is supernatural and personal immortality, in the old sense, may go the way of the infallibility of the Pope, of the letter of the Bible and the Trinitarian divinity of Jesus. But even so, far more that is good remains and far more that is new is brought to light than all that is lost. What is the corner-stone of our faith? The theocracy and the prophet statesman who guided every step of ancient Hebrew history and Jesus as the ideal type man of the race, devoted with utter abandon to the

love and service of God and man, the one of all who ever lived more protensive toward the future, using the past only as a key to it, who, if his interpretation and temporal perspective of the coming kingdom were not inerrant, conceived its outlines truly and showed the true moral attitude to it, Jesus the truest member of the *genus homo*, the superman;—this conception above criticism and in some respects above historicity itself, abides. The psychology of Jesus and the Christian life, as now beginning to be set forth by Flournoy, Baldensperger, Harnack, Runce, and I may add, by Leuba, Starbuck, James, Coe and many others, make his life glow with a new light and heat, like gold purged of dross, till all sense of loss vanishes when compared with the gains. This psychological movement, which ought to have been Unitarian, and is, in my humble judgment, sure of a career in the next generation, will enlist no less an era of scholarship and be more fruitful than the critical era has been because more positive. But it was reserved for President Harper, of Chicago, to be the first to see and to say how central this must be in the future training of clergymen. It has been said that all who become truly liberal pass through a Unitarian stage, even if they do not know it. But why should they ever emerge at another certain stage? The day of the crude rationalist, who tastelessly and borously demonstrates that the whale did not swallow Jonah or that even Lazarus and Jesus did not literally and somatically arise from death, has passed. His denials have no weight because we realize that true religion is not involved in such questions. But it must be a duty especially laid upon us to see that negations do not cause religious indifference but are swallowed up in essential and glorious affirmations, for the measure of man's power in the world is his capacity for belief and not that for doubt. Instead of the meagre endowment of our seminaries, the achievements of whose professors are a marvel, even without considering their environmental limitations, the wealth and learning of this denomination ought to make religious scholarship its specialty and cause it to feel that all the best constructive learning of the land and in its field should be in these institutions. How some of these most promising professors in seminaries of other denominations would flourish if transplanted to our freer air! To endow academic chairs or even universities is the best of all the long-ranged, statesmanly ways of preforming the future. In an address at the Musée Guimet, the greatest school of comparative religions in the world, it was lately proposed to prepare native Buddhists, Confucians, and Mohammedans to preach and revive their own religion in their own lands, on the assumption that a good representative of these cults was better than a poor, pinchbeck Christian. And why could not Jews, Catholics, Baptists, Methodists and the rest teach all that is

distinctive for their own faith and practice in a central seminary? But the afflatus of the muse of the future must not make me a dreamer or a visionary. You have the prestige and the means. Why not utilize them more in this field? Do you not need one of the chairs of religious education based on the new knowledge of childhood and youth, such as is now being founded elsewhere, one solely devoted to charities, one each of the few leading ethnic faiths of the world that shall be sympathetically and constructively presented now that the earth is brought to our doors by the new cosmic consciousness, and one of missions now that the old methods of propaganda are breaking down and we see the new sympathetic way? Is this not a day of opportunity unprecedented in the city of Mansoul? Religion is being re-revealed to the future of the race and never have our ideas of the future undergone such rapid expansion as within the last few years. Instead of present apathy I believe that, from the new outlook towers, a new dawn is breaking in this materialistic money-mad age, and that another generation will see religion resume its rightful place as the crowning faculty of man, as the chief instrument of progess, the spring and motive power of interest in science, and that, radical as may be the reconstructions it yet needs, Christianity can never be superseded because it is based on love which is the supreme power in the world and the promise and potency of all future generations.

And for the Sunday School, childhood must have myth and miracle because they are the *lingua franca* of the heart and of the imagination. The reason and even the intellect are largely individual products, but the feelings and imaginations are racial, purely human and make us citizens of all times and spectators of all events. If human evolution were finished and its nisus spent, it might be otherwise, but their very existence and strength is the best proof that man is yet in the gristle, if not in the tadpole stage, and that the best history cannot yet be written because it has not happened yet. Therefore feed the fancy and the sentiments, and instead of the subtle senescent insinuations of a sense of superior insight if the supernatural is detected and challenged, make childhood as unconscious of miracle in scripture as in Homer, so that all the idealizing powers be fully developed in their nascent plastic stage. Cultivate sympathy before criticism for some of the best and most marvellous lives of the saints, for interferences of the order of nature by deity. Delay rather than precociously hasten the dawn of skepticism. Develop agencies to equip teachers with a wide and, above all, well-chosen repertory of stories, and train them in the master art of telling them, as ancient bards and minstrels transmitted all that was known before print kept alive much fit only to perish and before books multiplied and

the printed page thrust itself between nature and the open soul. Plant deep by folk-lore methods the love of sky, stars, sun, moon, sea, forest, trees, flowers, birds, animals, as they were loved and known before they were labelled with Greek and Latin nomenclature, and before laboratory and technical methods made hard the way of the soul to its proper pabulum.

For adolescence, restore a carefully revised conversion cult, for this is universal among every savage tribe and every race and sect on earth save our own. It comes at the age when every normal youth and maiden, having been fed, clothed and educated (all the currents going to the individual), begins to feel in the springtime of maturity that the currents must be reversed and self subordinated to the higher life of service. One of the chief touchstones of a cult is how it achieves this great natural revolution from egoism to altruism, which change comes either suddenly or gradually to every soul that attains full maturity. Teach briefly but very clearly something that every youth at a certain age most of all wants to know of the new power of transmitting life, and make young men feel that to his honor, which is one of the strongest and highest but most easily perverted sentiments, is committed the interests of future generations, for between sex and religion God and nature have wrought such a bond that each is exalted or degraded with the other. Magnify religion by restoring its old function in this field. Do something, at least, to save youth from the new dangers that now threaten them, especially in urban life. Teach a little of the ethics that begins not in the abstract problems of the sanctions of morality, but with personal regimen and the higher hygiene. And, lastly, impart in brief epitome, orally without much book work, but frankly and without reservation, your own best and highest thoughts and feelings concerning all the great problems of the world, that your own interests may be infectious. Disguise nothing of your own ignorance or doubts, recognizing the passion of the young people in the teens for complete adult companionship on their level. You know nothing and can feel but little which cannot be communicated to the bright boy or girl of this age which has, for a brief period, almost a genius for imbibing knowledge by first intention. For art, history, literature and all the cultural remainder, your Sunday School Manuals show that you have already made better provision than any other denomination.

I have spoken more from the heart than from the head. Our history seems to me the proudest of that of any religious body. Our possibilities have inspired the greatest hopes, although both seem now a little on the wane. If I have been too frank I can only pray you to pardon my temerity; if mistaken, to forgive my ignorance.

HOW CHILDREN LEARN TO READ: AN EXPERIMENTAL STUDY.

By Dr. Lucinda Pearl Boggs, Urbana, Illinois.

The experiments recorded in this article were undertaken because the writer believes that reading is one of the most difficult and most important tasks of the child's first year at school. The purpose of teaching children to read seems such a simple one, namely: to be able to associate ideas with printed forms, that it seems there should be one natural psychological method. That there is such a method, most educators agree, as President Hall says, but it has not yet been worked out and perfected so that it meets with general approval, and much remains to be done before it can be shown to be a satisfactory, universally applicable method. It is hoped that the results of the experimental tests made will contribute toward elaborating and establishing such a method.

A true method must recognize that the content of the printed forms should seem to the child *worth* reading, be interesting. Thought content is the important element, and its association with correct printed forms, the chief process. This is a very old principle. In a first reading book published in 1833, used by my father, the "Advertisement" closes with the remark, "No other regard to classification, or arrangement of the different lessons which compose this work, has been observed, than to make them as interesting as possible." The compiler tells the young beginners that "To read without understanding, is like eating nuts uncracked, the words are the shell, the meaning is the *meat*."

Any method which violates this principle of going from content to form cannot hope for the best ultimate results. The old alphabetic method and some of the later phonetic systems are decidedly guilty of this violation besides other pedagogical sins. The confusion which existed in the minds of people regarding spelling, pronunciation, and reading proper, is partially to blame for these formal methods which lead the child all around by Robin Hood's barn causing him to learn a tiresome amount of preparatory stuff which does not prepare him for reading in the best way. Nearly every method now employs words and sentences in the first lessons, but they are too often words and sentences chosen for their form value instead of their thought value, *e. g.*, "The bat hit the cat on the mat."

A great deal has been done the last two decades by experimental psychology in investigating the reading processes, and the results of many of the experiments help to discover the defects in the old methods of learning to read and give valuable aid toward establishing a better one.

For example, the idea that words are recognized by noting the letters or parts of which it has been composed, has been contradicted by Becher,[1] who finds that the gross word form is the important factor in bringing about recognition. Messmer[2] says that long words are recognized in the tachistoscopic reading after a number of exposures in which the attention is fixed successively on small groups of letters dependent on optical distinctness of the different groups. According to Cattell,[3] Sanford,[4] and others, the relative ease with which certain letters are recognized in comparison with others is considerable. Sanford's grouping for ordinary small type is as follows: m w f p q r j v k b y h d g x a i l u s t n e c o l. This would indicate that when the words were resolved into their parts, the vowels would be the last rather than the first upon which to lay emphasis. A very good primary teacher declared that her pupils paid little attention to vowels in reading, but recognized the words mostly from consonants. Another reason than their indistinctness of form, that vowels are naturally ignored, is the variety and confusion of their sounds. If vowels are the letters to be taught first, there must be greater distinctness in their printed form and less confusion in the sounds attached to each.

Cattell[5] also finds that when two or more letters up to five are exposed at the same time, the total time needed for recognizing them may be shorter than when each letter is exposed separately. Short words are recognized and spoken a little more quickly than letters, which goes to show that there is no physiological or psychological reason why a number of letters cannot be grasped as a whole. He finds that words not forming sentences and letters not forming words take almost twice as long for recognition as when they are in familiar construction, and that three times as many letters can be recognized in words as

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[1] Becher: Experimentelle und Kritische Beiträge zur Psychologie des Lesens bei kurzer Expositionzeit. Zeits. f. Pschol. u. Physiol. d. Sinnesorg., XXXVI, 1904, pp. 19-73.

[2] Messmer: Zur Psychol. d. Lesens bei Kindern u. Erwachsenen. Archiv. f. d. Gesammte Psychol., Bd. II, 1903, pp. 190-298.

[3] Cattell: Uber d. Trägheit d. Netzhaut u. d. Sehcentrums. Phil. St. III, p. 94 ff.

[4] Sanford: The Relative Legibility of Small Letters. *Am. Jour. of Psychol.*, Vol. I, p. 402 ff.

[5] Cattell: Uber d. Zeit d. Erkennung u. Bennenung v. Schriftzeichen, Bildern u. Farben. Phil. St., II, pp. 635-651.

when isolated. He states that the maximum of rapidity with which one can read letters which form words and words which form sentences changes with the knowledge of the language and of the selection. If content is of value in an adult's reading it would seem to indicate that it would be of value in a child's learning to read. He also finds that sentences were taken in as a whole in his experiments and we know that many people who read rapidly read by sentences instead of by words. Nevertheless he finds that if one has grasped the meaning of the sentence he has a clear vision of each word. Thus there seems to be no physiological reason or psychological reasons why sentences should not constitute a unity in reading and in learning to read.

Messmer[1] finds that children from seven to twelve years of age read nonsense text almost as rapidly as significant texts while adults take almost twice as long for the former. It would be interesting to know whether these children learned to read by some method which placed little stress on the thought side of the reading. He also says that children pay little heed to orthographic or grammatical rules in reading by the tachistoscopic method, showing that they grasp the whole rather than analyze. On this very point President Hall[2] says on reading methods: "Children love wholes and their mental acts are large, generic, and often complex. They abhor elements, details, abstractions. They find, at least in the vernacular, sentences easier than words."

Impressed with the roundaboutness of the different methods of reading, with their mechanical, uninteresting detail, and having experienced as primary training teacher the actual difficulties of teaching the child to read, I was driven to consider the process closely. Two things in particular I noted in my observations. Children were interested in the reading so long as the content was interesting. They became restless and inattentive when mechanical drill on sounds and forms began, if the drill was not very rapid and "snappy." But rapid mental work soon produces fatigue, and Messmer[3] has pointed this out in saying that the effects of fatigue are found to be greatest in the most rapid reading, and that results of fatigue are more marked in children than in older persons. Short, rapid drills of two or three minutes can be interspersed in a long, slow reading lesson where the children are busy with an interesting story, if it does not break the continuity of thought and destroy their interest; otherwise, it is better at the begin-

[1] Messmer: *op. cit.*

[2] Hall: Monograph, How to Teach Reading, p. 14, Heath & Co., Boston.

[3] Messmer: *op. cit.*

ning and end of a lesson. A lesson which leaves a child fatigued has taught him false ways of working and tends to disgust him with working at all.

Aware of the value of an interesting content and of the pernicious effects of too rapid mental effort, the experiments reported here were different in method as indeed they were in purpose from any hitherto made in reading. No effort was made to determine the exact time of exposure of each printed form, though it was approximately the same, but the number of times any one printed form or unit must be shown the child before he could recognize and name it himself. The printed forms, or printed units, as I prefer to call them, were a letter, a syllable, or compound phonogram, a word, and a sentence, and were selected with a view to testing the different methods of reading, as the alphabetic, phonetic, word, and sentence methods. My observers or subjects were four little boys under school age who could not read, and the method was very simple and natural, as it must of necessity be with such young children.

On a stiff white card was written a letter of the Greek alphabet. The Greek letters were chosen because many children learn the letters at an early age from blocks, etc., and because I did not wish the letter to recur in any of the other units. Below the letter was pasted a meaningless syllable, selected from the phonograms of the *Rational Method*, such as *ness*, *ing*, printed in a heavy, but simple, odd type. Underneath this was pasted a word which had a definite content for the child such as mamma, dog, etc., in ordinary clear print. Lastly, at the bottom of the card, was written in large vertical script a sentence from the story of The Wolf and the Little Pigs, which I had been teaching the children and in which they seemed very interested. A specimen card would be like this:

Δ
per
hen
Let us go to the Franklin fair.

This card was placed at a convenient distance before the child as he sat by me while a larger piece of cardboard, with an opening sufficiently large to expose one line at a time, was held before the card and each line on being exposed was read by me and repeated by the child. Only a very short time was allowed for each exposure and was approximately the same in all cases excepting for the sentences, but still long enough for the printed form to make a definite impression. When the whole card had been gone through in this manner, the lines were again exposed and the child read those he could remem-

ber. If he could not recall a form in the usual time, or miscalled it, I read it and had him repeat it as at first, and then after having gone through the whole card we returned to the form which had caused the difficulty. If the child could not this time recall it I read it again, having him repeat it and after a short time returned to it again. Rarely ever were more than three exposures necessary. I employed eight cards altogether, showing the same ones on successive days. The children seemed to be working under natural conditions without any embarrassment, and rather enjoyed it. Although there was greater uniformity in the final results than I had expected, there was considerable difference in the children and in their method of attacking the problem, while their mistakes were also characteristic, so that a word as to the children themselves is needed.

H was a sturdy, healthy boy of five who took great interest in the whole process and believed he was learning to read. He had learned a few words and sentences several months before, but had forgotten them entirely, though I believe it had a slight effect on his reading. He was capable of sustained attention and accomplished almost three times as much in the experiments as *W*, who was employed about an equal length of time. He showed considerable improvement, reading the cards the last time with more correctness.

W was a weakly, reticent child of nearly six who did not speak distinctly. He seemed interested in the story, but put forth little effort in reading the forms and his attention was difficult to keep on the work, though he showed no unwillingness to undertake the task.

J was a delicate, quiet child of five, quite interested in the work and anxious to do his best. Twice he attempted to read sentences before I had read them for him, having from the other side of the room heard *M* reading sentences. He showed considerable improvement the second morning, although his chief fault was that his glance left the card so quickly, which accounts, perhaps, for his miscalling forms as often as he did.

M was a healthy, bright boy not yet five. He was very interested and attended well, although he took the whole thing as play. He misread but two lines and showed considerable improvement at the second trial. The fact that he had learned his letters affected his reading, and on the whole he associated the oral and printed best of all. *J* and *M* were employed at two different times and relatively accomplished as much as *H*.

The table below gives the results of a number of experiments and is to be understood as follows: Under T in each column is given the total number of tests made with that printed unit. Under R is given the total number of times the printed units

were shown before the child could name them correctly. Under W is given the number of times the unit is miscalled, and under Av. we have the average number of times which each printed unit of that class must be shown. T. Av. means the total average for all forms.

	Letters.				Syllables.				Words.				Sentences.				
	T	R	W	Av.	T	R	W	Av.	T	R	W	Av.	T	R	W	Av.	T. Av.
H	32	60	2	1.87	32	72	6	2.25	32	50	4	1.56	32	40	0	1.25	7.2
W	12	36	11	3	12	29	9	2.42	12	20	9	1.66	12	13	4	1.1	8.2
J	10	26	3	2.6	10	22	2	2.2	10	18	3	1.8	10	10	0	1	7.6
M	7	11	0	1.57	10	22	1	2.2	10	16	0	1.6	10	12	1	1.2	6.6

In all cases the sentence is recognized more often the first time than any other unit. The word was recognized more often than the syllable or letter except in the case of *M* who had learned the alphabet some months before, but it is practically the same. For this reason three tests with letters must be thrown out as the the child called the Greek γ, y, and ζ, z. In two observers the syllable must be shown more often than the letter, and in the two others the letter must be shown oftener. In both cases where the syllable must be shown oftener the children had learned some English letters.

It is decidedly worth noticing that there is a greater uniformity of result in the case of any one printed unit for the different individuals than there is for one individual with the various printed units, excepting in the case of letters for which the reason has already been given. For example, under sentences there is a difference of only .25 between the highest and the lowest, and under syllables .2, while in the case of *W*, letters must be seen almost three times as often as sentences. *M* and *H* each must see syllables once oftener than sentences and these two show the greatest uniformity. It is worth while comparing *W* and *M* as having the lowest and highest averages in regard to the matter of miscalling forms. *M*'s only mistakes one form for another twice while *W* miscalls forms thirty-three times, showing that he did not get as distinct and vivid impression of each individual form. He persistently called the second card by the names he had learned for the first card. He only misread one sentence and that came about by his reading the sentence on the second card as the sentence on the first as soon as he saw it, before I could read it to him. Apparently he saw no difference in the sentences but memo-

rized the words entirely from hearing them. *M*'s mistake in reading the sentence was only certain words misread, and in one case after looking at the sentence for some time he said, "I know it, but I don't know the beginning." On being supplied with the first words, he read the senteuce correctly, showing, I believe, a definite association between printed and oral words. *M* and *H* would sometimes say, when not able to recall a form, "I don't know." *W* and *J*, who had next the largest proportion of miscalled words, never seemed to realize that the form had been perfectly forgotten. If they did not miscall it, they sat waiting as if expecting it to come by inspiration. I allowed a uniform length of time before I told them the correct reading. We see that the weakest child did almost as well with the sentences as the others.

An incident which made a profound impression on me, child though I was, occurred while I was attending a country school. It has all the force of a carefully planned psychological experiment and is very apropos. During a short spring term a small boy started to school and the teacher employed the sentence method in teaching him to read. He was a timid, backward child and with the greatest difficulty learned to read a few sentences about the cat, the rat, etc., and to know a few words. He did not attend school again for a year, and the next teacher attempted to teach him the alphabet alone, but in the two or three months he succeeded in learning only a few letters. The child died during the next winter, so that the ultimate result must be unknown, but certainly in this case the sentence method was vastly easier for the child.

Of course no one is going to adopt the alphabetic method, but there is a very decided danger of teachers laying too much stress on forms without meaning, as is done in some of the phonetic methods. This article does not pretend to present any new method, but wishes to emphasize the value of content as opposed to form in teaching children to read. Every wise teacher, if she keeps this rule in mind, will learn when the child must have drill on words, and when he should learn spelling and phonics during his school course, for they are not to be neglected. But learning to read and loving to read are to be placed first, for reading is the "Open Sesame" to a vast treasure house.

STREET GAMES OF NEW YORK CITY.

By JOHN H. CHASE,
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Children have been asked what games they liked the best, and from these lists the most popular games have been tabulated. Such lists have been made for Brooklyn children, and for Worcester children.

The trouble with this method is that the most recent games played are apt to be recorded by children as the best, gambling games—like craps—are rarely mentioned, and finally children often record games which they enjoy, but rarely play.

Realizing these defects, and desiring to obtain an accurate list of the most popular out-door games of New York City, I followed the plan, for two years, of walking through the crowded tenement house streets and tabulating (1) the different games being played, (2) the number of children playing each, (3) the amount of seeming interest, (4) the date. The same streets were generally covered each day, but this was varied occasionally to see if different regions were doing the same thing. As a rule, with some variations, the great mass of tenement house children played the same games at the same time the city over. And the ten most popular games during the season when I could watch them, were:

I. Playing with fire—bonfires, fires in buckets, etc.

II. Craps—a gambling game with dice.

III. Marbles—always "for keeps," and a simpler game than in the country; several simple varieties.

IV. Potsie—a primitive kind of hop scotch.

V. Leap frog—over milk cans and fire pumps, as well as over boys. Commonest contest to see who can leap the farthest before clearing the obstacle. Many varieties—"head and footer," Spanish fly, etc.

VI. Jumping rope.

VII. Baseball. Probably should be nearer head of the list, but my observations did not include the summer.

VIII. Cat. It is probably also played in the summer. A short stick is pointed at one end and placed on the street. The point is tapped with a longer stick or bat. When the short stick bounds into the air it is hit down the street, and the other boy throws it back as near the starting point as possible.

There are three ways of scoring, according to which variety of game is being played.

IX. Buttons. Boys throw, or slide, buttons in turn, from street curb toward a wall. The boy coming the nearest throws all the buttons up into the air. They fall in a shower and the ones which land "heads up" are his. Then the boy who came second closest throws the rest up, and keeps those that land "heads up," etc. The same game is played for other things. Cigarette pictures are played for in this way during January; pennies and almost anything flat at different seasons.

X. Tops. They are generally put in a ring, and the game is to split your opponent's top. You may have a poor top for splitting purposes and a good one for spinning.

The dates for different games are as follows:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.
(1)	Leap frog.	Leap frog.	Potsie.	Potsie.	Snow balling.	Cat.	Base ball.	Base ball.
(2)	Craps.	Craps.	Craps.	Craps.		Tops.		
(3)	Buttons.	Buttons.		Cig. Pic.				Cat.
(4)	Fire.	Fire.	Fire.	Fire.	Tops.	Marbles.	Marbles.	Marbles.

Conclusion.

1. These ten games are unlike any lists made from the answers of children.
2. The table shows the fire instinct to be very strong.
3. The gambling instinct is very strong.
4. Three popular games are generally going on at the same time.
5. The running games such as tag, prisoner's base, etc., are replaced by cramped games such as leap frog, hop scotch, etc.

NOTES ON THE PSYCHICAL CAUSES OF SWEATING.

By G. E. Partridge.

These notes were written in 1898. It seems that they contain a few points that are still worth recording. The data consist of some replies, 130 in all, to sections II and III of the questionnaire on automatisms and nerve signs, sent out by President G. Stanley Hall in 1894. The questions in the sections referred to called for remarks on the causes of sweating, its point of beginning, of greatest abundance and of least abundance. All of the replies are from Normal School girls, in age from seventeen to twenty-two years.

Summaries of the data follow:

First appearance—forehead, 37; upper lip, 34; back, 17; under arms, 13; neck, 13; palms, 13; nose, 11; lower lip, 6; temples, 4; back of neck, 4; chin, 3; face, 3; breast, 3; chin, 2; bend of elbow, 1; back of arm, 1; under eyes, 1; feet, 1.

Most abundant—Under arms, 14; hands, 14; forehead, 13; face, 11; between shoulders, 11; neck, 10; cheeks, 6; upper lip, 5; waist, 3; chest, 3; temples, 3; knees, 3; back of neck, 2; legs, 2; feet, 2; nose, 1; lower lip, 1; chin, 1; between fingers, 1; end of fingers, 1; body, 1; under chin, 1; arms, 1.

Least abundant—Hands, 25; cheeks, 14; face, 12; legs, 8; arms, 6; forehead, 5; feet, 3; knees, 3; back, 2; upper lip, 2; neck, 2; forearm, 2; back of neck, 2; chin, 1; head, 1; thighs, 1; palms, 1; ends of fingers, 1.

Causes—Fear, 31; excitement, 22; nervousness, 14; anxiety, 13; mental exertion, 11; spontaneous, 11; anger, 8; grief, 6; pain, 5; embarrassment, 5; surprise, 4; happiness, 3; illness, 2; after blush, 1; dread, 1.

Perhaps it would not be well to put much confidence in the replies to questions about local differences in sweating; these are not easy observations to make, and there are many conditions that would prevent ordinary reports from being at all accurate. Evidently, however, there is a problem here, and need of careful observations under favorable conditions. The data indicate that there is some order in the appearance of perspiration, and some tendency to greater abundance in some parts than others, aside from the more obvious mechanical causes and natural conditions.

The psychic causes that are assigned are interesting. If we put excitement among the abnormal or unpleasant emotions, as it may well be in these instances, all but three of the cases are to be classed as caused by unpleasant feelings. It is not very clear why sweating should be caused more frequently or more abundantly by unpleasant feelings than by pleasant feelings. There might arise in the mind two sets of explanations: either unpleasant emotions are *per se* more intense than pleasant emotions; or there is some reason, biological, chemical, or mechanical, why unpleasant emotions are accompanied by sweating, either as a direct expression or part of the emotional disturbance, or as the indirect result of inhibitions, excitations or spreading of stimulus that are set up by the emotion. Whatever of truth may be contained in the replies to our questions, they serve to raise a

problem in the expression of the emotions. The problem may be stated in two points. Why, and how, is sweating an emotional expression at all? How can tendencies to particular order of appearance of the phenomenon, or local differences, be accounted for?

One would naturally turn first to the physiological facts. Sweating is under the control of the nervous system. The chief centre is in the medulla and there are subordinate centres in the cord. The two phenomena of sweating and circulation of the blood in the periphery are independent of each other, for there can be sweating when the skin is anæmic, and on the other hand the skin can be congested with blood without sweating. There are several means of stimulating the sweat centres: (1) directly by the action of blood on the centres in the medulla, evidently the temperature of the blood being the exciting condition; (2) reflexly, by heat applied to the surface of the body; (3) by increased cardiac and vascular activity; (4) by action of drugs; (5) by a watery condition of the blood; (6) by emotional disturbances. The quality of the secretion undergoes modifications in several ways. There are pathological conditions in which it is much modified; and some mental states are said to cause pronounced changes, perhaps chemical, in the perspiration.

The primary purpose of sweating is clearly to regulate the temperature of the body. It stands also in sympathetic relation to the kidneys and the lungs, and each of these functions supplements the other. Poisons of the body are eliminated in perspiration, and as we go lower in the animal scale, the respiratory functions of the skin appear to increase. It is said that in the frog for example, respiration can be maintained by the skin, if the lungs are removed. Skin respiration was the first form of breathing, and that it is still an important means of elimination of excretory products is shown by the fact that death can result from varnishing the body, or otherwise preventing the normal excretion.

Considering the physiological data, two explanations are suggested as possible to account for the fact that emotions stimulate sweating mechanisms. (1) There is, connected somehow with emotional disturbances, either an increase in the temperature of the blood, or rapid production of toxic products which stimulate directly the sweat centres. Unpleasant emotions, as has been suggested above, may be more intense, or they may be connected with qualitatively different changes, say chemical, as compared with other emotions. (2) The stimulation of the sweat centres may be produced through the stimulation of vascular or other motor mechanisms, or by direct spreading of excitation. These together constitute a physiological explanation of the connection between sweating and the mental state.

But the question that is always arising in the mind of the psychologist in regard to emotional expression, suggests another line of explanation. It is possible that the expression of emotion in sweating has other significance than a merely mechanical or physiological one. In the particular matter of sweating, the question is whether there is any direct connection between the mental state, and the physiological effect, by nervous action of an "instinctive" nature; or, again, whether the peculiar localization of sweating has any biological significance, whether it has come about by adaptation to any conditions, that are not fully represented, in the physiological explanation. It is not to be expected that the physiologist shall take into account these nervous connections; the anatomical relationships would be too special for his observation in any case.

In the matter of localization of sweating, the physiological explanation that there are more sweat glands in one part than in another

does not go far enough; one may ask why there are more glands in one part than in another. Of course the tendency of the skin to heat by friction explains a part, but not all. Apparently the conditions as well as the function are complex. In some particulars, sweating and susceptibility to tickle go together. The surfaces of the axillæ, the lips, parts about the nose and neck are more susceptible to tickle than adjacent parts. The forehead seems to be an exception, because it sweats easily but is not very sensitive to tickle.

These facts suggest the possibility that sensitiveness to tickle and to sweat have had a related origin, that possibly delicacy of skin in a part has been the cause of development there of a rich supply of sweat glands, or that sweating has produced increased sensitiveness and delicacy of the skin. In the latter case the sweating function would have been preserved because it performed the very essential function of keeping the skin sensitive. There is a clear enough biological reason why certain parts of the integument are more sensitive than others, both on the ground of the touch function, and the protective function of the skin. The manner of growth of some nerve endings in the skin is instructive in this connection. They grow out towards the surface, and continually break off in scales. Moisture of the skin favors the growth of the nerve endings out to the surface, and so directly increases the sensitiveness of the skin in those parts.

If we follow up a little the causes of the peculiar distribution of sensitiveness on the surface of the body, the connection with the function of sweating may be clearer. It is easy to understand, for example, why the neck and the parts immediately about the mouth, must be more sensitive to touch than some other parts of the face, or body. The throat is an exceedingly vulnerable part, and its quick action in combat is indispensable. It is the objective point of strategics in many animals. As a fighting movement, grasping the throat still persists in the human, perhaps rather as an instinctive movement than an intentional attack. So it is very probable that the sensitiveness of the throat, as indicated in susceptibility to tickle, has grown up in connection with combat and that the sweating function has developed as an aid to it. Similar explanations serve for the parts about the mouth.

The rich supply of sweat glands in the palms of the hands and soles of the feet suggest similar conclusions; that they have been produced as adaptations to early prehensile, and locomotor functions, that require sensitive surfaces. Perspiration may have performed the double function of prevention of injury to the skin by contact and friction, and of aiding the development of sensitiveness. If the palm and the sole are the homologues of the plantar surfaces of the ancestors of man, there is abundant reason to expect exactly the condition that we find; the cruder adaptive uses of the hand and foot have given place to other touch needs, but the physiological traces may remain.

There still remains the question whether there is other relation between the psychic states of unpleasantness or any of its special forms, and any even more direct stimulation of the sweat function, analogous to the instinctive reactions in general; whether copious sweating has played any special protective part, or other function, that would bring it under the effect of selection, in a definite manner. It can only be said that the whole question of the psychic origin of sweating is open as a problem in the expression of emotion, or accompaniment of emotion, and that it is deserving of careful study, as are other problems of emotion, both by physiological and psychological methods.

LITERATURE.

A GERMAN CRITICISM OF AMERICAN SCHOOLS.

An anonymous "German-American" says[1] that the American schools are far from accomplishing what is done in Germany, and thinks the inferiority of the former due to the following causes which teachers cannot obviate:

1. The very heterogeneous nature of the population, representing about every land on earth and every ethnic stock and tongue. To assimilate those of Teutonic heredity with those from far lower stocks seems to him bad for both. Moreover, some of the languages are so remote from our own that about all that the school can do is to teach a little English. Our public schools in many localities are a smelting pot. New human waves are ever breaking upon our shores and must be Americanized.

2. The second source of inferiority is the roving habit of our people. They constantly move and change their locality, owing to the great development of the means of transportation. Nowhere is the population so in flux as here. One fifteen-year-old girl is described, who, since the age of six, had twenty-three different teachers. Some schoolrooms show a surprising percentage of change each year, and, indeed, each term. Especially, in some parts of the West, the population drifts very rapidly. The writer tells of one house which in sixteen years had been inhabited by thirty-seven different families.

3. Our local self-government generally results in control by many-headed boards, representing the various heterogeneous elements in the place, lacking unity, its decisions liable to be reversed by new majorities. There are endless debates, constant tinkering of the laws and programme. Our democracy is always invoking the press and elections, and thus setting up new currents of whiffling public opinion which affect school policies. There are some twenty thousand public and private kindergartens in the country, and perhaps the spirit of the grades above is too much infected by them.

4. In a republic, a law is a law only so far as the board resolves to execute it, and when a law aims for the welfare of future generations, such as that making school attendance compulsory, the citizens evade this duty in every possible way. Very often boards lack foresight to foresee the growth of population and hence it frequently occurs that there are not schoolhouses and rooms enough, so that the law requiring attendance cannot be enforced. Hardly a single city now has school buildings enough to accommodate all its children of school age. Sometimes where population changes rapidly, as in St. Louis, ambulatory schoolhouses that can be moved from one district to another have been found advisable. In general all school attendance laws not enforced by a penalty soon become a dead letter. Indeed this is felt to interfere with freedom. In Germany, out of the round ten million children, only a few hundred escape the school, and the illiterate class is very small. Here the white illiterate voters alone number about seven in every hundred, and among the blacks nearly

[1] Warum kann die amerikanische Volksschule nicht leisten, was die deutsche leistet? Samml. pädagogischer Vorträge. 1905, Bd. XV, Heft 2.

47½ per cent., despite the fact that in 1903, 251½ million dollars were spent for schools. Sometimes child labor for money both in the city and on the farms is the cause, and sometimes sheer inertness of the parents and school authorities.

5. One cause of disturbance is the confusion between the number of enrolled children and those daily in the schools. Some 30 per cent., on the whole, this author estimates, are absent, and in some cities and states, this proportion rises to 50 per cent. Many of these absentees remain away from school for a long time, and in other cases a certain proportion are present one day and another fraction the next. All kinds of trivial excuses are made. The school authorities recognize this, and in equipping their schools know that a room equipped for 40 pupils will suffice for the 50 who are due there. There are now some 27 million youth in this country between 5 and 21. 16 million are enrolled. The average daily school attendance is about 12 million; those enrolled in colleges and academies, about 300,000. In the colleges and universities, all told, there are less than 175,000. Less than half, then, of the children of school age are in school, and less than three per cent. of those who should be in higher grades are found there.

6. One great aid to many systems has been found in the diverse auxiliary supplementary classes. These seem undemocratic in the United States where people think their children as good as others and better. If a teacher takes pains to prod a dull or listless pupil she is usually beaten in this conflict with stupidity, and collapses mentally or nervously, so that the average time of service of the American teacher is rarely more than five years. This aspect of things is particularly sad when we observe that, for instance, in New York 28 per cent. in one school, 50 in another, are from two to six years older than they should be at their grade. This means that some 600,000 children, if they complete the eight years' course, must remain in school from two to six years longer than they would have remained if they had entered at the age of six and been advanced a grade each year.

7. The German school year lasts from 45 to 46 weeks; the German school week, 2 to 6 days, 4 of which have 6 hours—in all 32 or 33 hours a week. In the United States the longest school year rarely is 40 weeks, and few have more than 35; the school week has 5 days, and the school day 5 hours. This means that $46\times33=1{,}518$ hours will accomplish more than can be accomplished in 40×25, or 1,000 hours, because the German child has 50 per cent. more time than the American. In America the vacation sometimes lasts as long as 12 weeks. Perhaps the school time cannot be prolonged in this climate without additional nervousness and restlessness. The high pressure which the German pupil endures might be impossible here. The teachers have no power to act in the matter. They cannot change the heterogeneity of the population nor its nomadic disposition, nor can they change the form of government, so that here everything not expressly forbidden is allowed. The folk school is ruled by the folk. People feel hunger, thirst and cold, but they do not feel ignorance. Fools only learn by experience.

8. The English language presents inconsistencies that interfere with its unity. It is not homogeneous, but a bundle of languages rather loosely rolled together. The German sprouts, as it were, from roots that are always able to produce new growths, and has never robbed foreign tongues. English is a kind of pudding-stone, and the effect of this upon the child is unfavorable. In general concrete ideas are Anglo-Saxon, and abstract ideas are French, Latin or Greek. Compare *man* and *friend* with *humanity*. If the child is to classify a dog,

it must call it *canine*, and the cat must become *feline*. Ziehen = draw or pull, anziehen = attract; gehen = go, Lehrgang = course of study; rot = red, erröten = blush; Huff = hoof, Hufschmied = blacksmith; Sturm = storm, Wirbelsturm = cyclone; zwei = two, zweitens = second; finden = find, Erfinden = invention; ruefen = call, Ruf = reputation; Spielen = play, Vorspiel = prelude; denken = think, Gedanke = idea; stellen = place, Nachstellung = persecution.

The Germans have a technical vocabulary which can be understood by the child because it is Teutonic. Thus German is far better adapted for the first school years than English. Spelling and pronunciation are simple and consistent. The German child of 6 learns to read and write in a few months. The English child needs two full years, and never learns how to spell. Correct spelling is a barbaric mind-breaking process. Thus the Germans can be well started in other tongues while the English are learning their own. The latter tongue, however, has the advantage of being almost without grammatical rules, and therefore runs easily in speech and script; but grammar is the logic of the elementary pupil, and thus the American child lacks logical training.

9. A whole year of our American elementary work is badly broken into by learning our unnatural measures and weights, which difficulty would be obviated if we adopted the metric system. We have three methods of weight—troy, apothecary, and avoirdupois. In surface and length measurement there are two modes which involve two different kinds of arithmetrical work and are utterly unrelated to each other. The German child simply needs to learn deka, hekto and kilo, also deci, centi and milli-meter, -liter and -gram, and all is done, and they have the key to every kind of mensuration.

10. For every fault of society, for every defect and crime in the State, for all diseases of the community, the school is thought to be the cure-all or sanitary hospital. The church demands time for religious work; the State for ethical and legal study; the workman wants his children taught to use tools; the merchant demands bookkeeping and shorthand; doctors require hygienic education; temperance apostles demand schooling in the ravages of alcohol; mothers want housework. Hence we have a vast number of inspectors, specialists for drawing, singing, gymnastics, manual training, etc.

The causes for the inferiority of American schools, which could in part be obviated by teachers, are the following:

1. Time is wasted and work too often degenerates into a kind of play. Kindergarten methods have leavened the grades. The æsthetic inclinations of the female teachers lead to ever new decorations with flowers, garlands, flags, many-colored leaves, distracting colored drawings on the blackboard, etc. Time is wasted in training for orderliness in going, standing, sitting and the teachers are motherly-minded and help the children over difficulties instead of spurring them on to self-activity. Women love to sacrifice themselves for the good of others and thus the pleasure in work is interfered with. Special teachers are almost rampant and are far too much respected, so that the programme is always under discussion. The work is multifarious—sewing, embroidery, cooking, basketry, weaving, paper-folding, moulding in clay, drawing, etc., and Chicago is credited with a school where the children are not taught their letters until they demand them.

2. Antediluvian methods, such as learning by heart, and especially the rage for consuming the hours of instruction by *hearing recitations*. Orthography is taught through the ear, by spelling. Grammar is

neglected. In arithmetic the rule is first given and then it is illustrated by examples. In geography there is more text surface than map surface, while the pedagogical journals give only baby food or pap in the form of petty methods, plans and devices.

3. Weak sentimentality interferes with discipline. Lovely woman is sympathetic even with weakness and defect, and the eternally feminine dislikes to use its sceptre as a rod. Moral suasion is demanded. The people usually assume that a child can do no punishable act if it understands that it is punishable. This is a mistake. Understanding is not sufficient to withhold from evil. The child knows the difference between good and bad, thine and mine, and knows the penalties. Hence law generally recognizes educational punishments for youth and waits until the child is in the teens before its full force is felt. Hence there are children's courts. The view that children should never be punished until they are mature enough to resist evil yields a rich crop of crime which is everywhere on the increase, both in precocity and in frequence. In the school, thus, can be found the causes of many popular excesses, such as the destruction of property, quarelling, lynch law, robberies, with which the daily press teems. The results of this feminization of education cannot be met by President Roosevelt's demand that wife-beaters be flogged, because this comes too late. To abolish corporal punishments for children, as is so often done, and to introduce them for adults is a strange inversion.

4. The sorest point in the whole American system is the insufficient professional training of teachers. In the best or northeastern portions of the United States only about 40 per cent. of the teachers have ever studied at a normal school. In the southern states this proportion sinks to 8 per cent. The American assumes that when God gives an office he gives the necessary intelligence to hold it. The laws of many States demand a license and private local examination boards which test the candidates in certain things. There is no provision, however, that makes these boards know what should be taught or know the history of education and its correlative branches, ethics and psychology, and concerning these matters the board almost never inquires, for it is often constituted of only local notables. The author of this pamphlet has been fifteen years an examiner, and most of all deplores the demand for home talent, so long as there are enough females in the school district who will work for the shabby sum of from three to five hundred dollars or even less.

5. Low salaries are the rule in America. Women must accept what the board offers. They can do what a servant girl can do—refuse to work longer at starvation wages. America spends enormous sums on its schools but far too large a portion of the school money goes for school palaces, free text-books, libraries, high salaries of inspectors, supervisors, superintendents and special teachers but not for the regular class teacher. Even in states like Pennsylvania, Illinois, and Wisconsin there are country schools where barely $300 is paid, and in cities, $400 is the salary to begin with. Now a teacher with a small salary, like every other poorly paid workman, will give only a minimum of energy to the work. In Chicago, was lately initiated a movement among teachers to organize like labor unions to demand better salaries. Men with families, of course, cannot live under such conditions. But raise the salaries of the women and the men would come back to the profession. The schools in many sections are not far above the level of pauper schools. This is wretched short-sightedness. Wages are far higher in other countries, where they are absolutely lower, because the cost of living is far less. Moreover, permanent tenures and retiring pensions do the rest.

6. Teachers should demand that raise of salary up the grades cease, and that salary increase with age and experience. The latter is the chief school of wisdom in this vocation. Good teachers are needed in every grade, and instead of the best going up and the worst remaining with the primary classes, the pay should depend on efficiency.

7. The last and most surprising error is to allow children to select their own topics of study. The university student is ripe enough to do this. He is choosing his profession and knows his own abilities, but in the lower or even in the middle classes of the gymnasium and real school, would provoke laughter and scorn in Germany. This again depends upon the shibboleth of the individual rights of the citizen and even of the child, in whom possibilities of being president are never forgotten. The child of 14 may ask what is easiest, but to allow him to determine where the chief labor of teaching shall fall is to make the school system the victim of whims.

It is often asked why the Germans are coming so rapidly forward in industrial, mercantile, technical and administrative fields, and it has been sometimes said that there was some secret about it. So there is. It lies in the method and matter of the school work. This is a secret to Americans. The German nation is forced to severe habits of industry to maintain itself with its poor soil, its bad geographical position and its enemies on all sides. It is this quality that has produced the regeneration of the German nation. Every child and citizen must work and think, or pain, and even starvation threatens. People into whose open mouth the bread falls can never learn or even see this secret. Another open secret is that, for every stage, Germany insists upon a preparatory stage. Every technical school demands a certain knowledge as an indispensable condition of its work. This is understood and accepted. The lower schools have their eye fixed upon the higher schools and upon the goal. This the American cannot understand. He always looks to outer standards. His higher schools do not give the training of a good burger school. May God better conditions in America.

This is the substance of the above pamphlet which has attracted great attention in Germany. We call the attention of Professor Münsterberg, who has undertaken the rôle of mediator between the two countries to this: first, as an infringement of his prerogative and second, as something which, so far as he is mediator, he ought to set right or else be held responsible for. G. H. S.

Premier Congrès International d'Éducation et de Protection de l'Enfance dans la Famille, Liège, September, 1905. Brussels: Libraire Albert Dewit, 7 volumes.

The fact that the management of the Belgian International Exposition (held at Liège from April to November of this year) voted to have an international congress of childhood, rather than the traditional educational congress, bears eloquent testimony to the high regard in which the new movement of child study is held.

This congress, organized by Belgian and foreign committees, was held at Liège on the 18th, 19th, and 20th of September. The presidents of the congress were Jules Van den Heuvel, minister of Justice for the Kingdom of Belgium, Henry Dalvaux, member of the Belgian House of Representatives, and Emile Dupont, vice-president of the Belgian senate. Most of the countries of Europe (and America) appointed special committees to co-operate with the Belgian bureau of the international congress.

The congress met in four main departmental sections, as follows: Section one, the study of children; section two, the education of children in the family; section three, the care and training of defective

children; and section four, agencies for the protection of children and youth. The second section—the largest of the congress—was again sub-divided into smaller departmental groups, as follows: Group one, general questions touching the education of children in the family; group two, family education before the school age; group three, family education during the school age.

STUDY OF CHILDREN.

Professor J. J. Van Biervliet, of the University of Ghent, presided over the section devoted to the study of children. Sixteen papers were presented—ten from France, four from the United States, and one each from Holland and Belgium. Professor Alfred Binet, of the University of Paris, presented two papers. In the first paper Professor Binet indicated the necessity of genetic psychologists co-operating with teachers, and he suggested the organization of a permanent international commission to collect and sift such observations and studies. In his second paper he forcibly brought out the need of studying the æsthetic reactions of children as a basis for procedure in school training.

Eight of Professor Binet's countrymen were represented on the child study programme. Mons. P. Malapert, professor of philosophy in the Lycée Louis le Grand in Paris, read an able paper on the pedagogical conclusions from experimental researches into the problem of mental fatigue. He seriously called into question many of the so-called fatigue results, and particularly those based upon researches made with the æsthesiometer by Griesbach and others.

Mr. L. Laberthonnière, editor of *Annales de Philosophie Chretiènne* at Paris, discussed the utilization of psychological experiments in educational practice. While recognizing that educational theory and practice must be founded upon a scientific basis, and granting that psychology is the science that furnishes this basis, Mr. Laberthonnière thought that the distinctly spiritual side of educational work should not be lost sight of. A child, he maintained, is not a thing, but a subject ("L'enfant n'est pas un chose, mais un sujet") and he cannot be educated as we manufacture the ordinary commodities of commerce.

Director Vaney, of a school in Paris, suggested some new methods of testing the mental progress of children; Inspector Bareilhes, of Toulouse, reported on some studies made in the schools of his district on the moral sentiments of children; Marius Dupont, of the National French School for the Deaf in Paris, outlined the anthropometric studies of the French Society for the Study of Children; and brief papers were presented by Mr. Tourt, Mr. Benazet, and Mrs. Rousson on French studies in this field.

Professor Van Biervliet, of the University of Ghent, the president of the section, in an able paper, presented some of the phases of mental work and mental fatigue; and he pointed out, among other things, the need of at least four rest periods or recesses during the school day. Principal J. Klootsema, of the Reform School at Alkmaar, Holland, discussed the utility and study of children; and he questioned the value of some of the methods employed in the study of children in Holland (and the United States).

Four Americans were represented on the child study programme of the Liège congress: Professor William H. Burnham of Clark University, Professor Anna Buckbee of the State Normal School at California, Penn., Principal Harriet A. Marsh of the Hancock School in Detroit, Michigan, and the writer.

Professor Burnham discussed the question of school hygiene in the United States with reference to its relation to the physical and mental

welfare of children. Progress in this field was indicated (1) by the appointment of medical inspectors of schools in such important cities as New York and Boston; (2) by the study and segregation of the mentally dull and children of arrested mental development; (3) by better provisions in the matter of school lunches; (4) by the establishment of vacation schools; (5) by the extension of school playgrounds; (6) provisions for school baths, and (7) better lighting and heating of schoolrooms.

Professor Anna Buckbee told the Liège congress what was being done in American normal schools in the matter of child study. The value of the questionnaires (particularly those issued by Clark University) was pointed out; also the need of giving the prospective teacher some simple problem in child life for more or less exhaustive individual study. She enumerated some of the American normal schools where child study was given special prominence; and while admitting the limitations of the work already accomplished, she thought the field was full of promise.

Miss Marsh presented the subject of child study in special clubs, and particularly in clubs composed largely of fathers and mothers. Miss Marsh, as readers will recall, has been unusually successful in co-operating with the patrons of her own school in her child study work; and her labors have attracted the attention of Belgians and others interested in this phase of child study.

My own paper prepared for the Liège congress traced the child study movement in the United States from its inception by President G. Stanley Hall, twenty-five years ago, to the present time. The forces employed, the methods followed and the results obtained were all briefly noted. Four results of the child study movement in this country were noted: (1) Greater interest in children and all that pertained to their mental habits; (2) more careful, scientific investigation of many of the physical factors conditioning the development of the young; (3) study of the problem of children's interests and the reconciliation of elementary school courses with the same; (4) the formation of mothers' clubs, parents' associations and like organizations for the moral and social well-being of the child in the home and the family.

One misses the names of many of the leaders of the child study movement in looking over the Liège proceedings. The absence of President G. Stanley Hall, the recognized leader of the movement, is apparent at once; so is that of Professor Earl Barnes, who has done so much to further the work in America and England. Professor Joseph Stimfl of Germany, Professor Frantesek Cada of Bohemia, M. Ferdinand Buisson of France, Dr. M. C. Schuyten of Belgium and other leaders should have been represented at this first great international congress; but the reason of their absence may have been—and probably was—due less to the Liège committee than to these leaders themselves.

EDUCATION OF THE CHILD IN THE FAMILY.

This was the large section of the congress—appealing as it did to parents—and because of its size and the range of its interests it subdivided into three sub-sections. The first subdivision dealt with general problems touching the education of the child in the home. Mme. Lucie Félix-Faure Goyare presided at the meetings of this section. Forty papers were presented at this section. Here again France played the leading rôle in providing most of the papers. Among the noteworthy topics presented by Frenchmen may be noted the following: Need of instruction concerning sex, by Dr. F. L. Blanchard, of Grenoble; need of popularizing education in the family, by Director Le

Brun of Claremont, Inspector Bertin of Saint Mihiel and Professor Chastaing, of Crest; and an interesting paper by Inspector Piffault, of Saint Yrieix, on the superstition and prejudices common in Brittany.

Other important papers before this section were: "The Peculiar Fitness of Women for the Work of Teaching," by Louis Arnauld; "The School in the Home," by Miss E. Boddaert, of Amsterdam; "The Hygiene of Clothing," by Valentine André; "Study of Children in the Family," by Mme. Nadine Koschkine, of St. Petersburg; "The Art in the Home," by Dr. Ernst Buss, of Glarus, Germany; "The Social-medical Aspects of Education," by Dr. Emile Barthes, of Gers; and "Appeal to the Clergy and the Working Men for the Popularization of Education in the Family," by the Abbé Simon, of Namur.

The second subdivision of this department, education in the family before the school age, was presided over by the Baroness de Pitteurs de Budingen, of Liège. Thirteen papers were presented. Dr. Frederick Eby was the single representative from the United States; his paper dealt with the organization of personality. Dr. Kaisin discussed the spinal troubles of young children; Mme. Gest, the sense training of the young child; Maurice Wolff, the question of kindergartens; Leo Claretie, the relation of play to education; Mr. Barrière, the cultivation of the observing powers of children, and Mr. Pacton, the cultivation of the will.

The third division of family education considered the subject of education in the family during the school age. Thirty-three papers were presented, fourteen of which were concerned with various phases of the collaboration of the family and the school. Eugene de Kovalevsky, of the Russian ministry of public instruction, Director Theodore Beck, of the Alsatian School in Paris, Inspector Flotters of Saint-Sivons, Inspector Dolidon of Nantes, and Principal P. Conrad of the Swiss normal school at Thur, were among the leading speakers. George Waforce, of Liège, presented an important paper on Pedology, the science of child study. Two Americans appeared on the programme of this section: Professor Edwin Grant Dexter, of the University of Illinois, on "The Effects of Weather on the Child," and Mrs. Heller, of Omaha, on "The re-instating and vitalizing of the home as a factor in education." The eminent French scholar, Professor Ernest Lavisse, of the College de France, presented a notable paper on the necessity and facility of training children to know and to love nature.

CARE AND TRAINING OF DEFECTIVE CHILDREN.

Section three of the international congress considered problems bearing on the care and training of defective children. Professor Jean Demoor of the University of Brussels presided, and thirty-nine papers were presented. These papers concerned the general problem of physical and psychical abnormalities, children of backward and arrested mental development, the deaf, the blind, truants and incorrigibles, juvenile delinquents, abandoned and neglected children, children who are crippled and deformed, sick and delicate children, speech defects, epilepsy and kindred ailments more or less common to child life.

Many of the speakers before this section of the congress were eminent alienists, and all were specialists in the particular line of defectives which they discussed. The introductory address was by the eminent French alienist, Dr. Bourneville, of the Bicêtre in Paris. Dr. Bourneville offered a scheme of classification for those defective children characterized by mental instability with or without perversion of the instincts; and he gave suggestions for the education and treatment of the different grades of mental deficiency, idiocy, and imbecility. The same subject was treated by Dr. O. Decroly, of the school for the

feeble-minded at Brussels. Professor Alfred Binet and Dr. Simon, of Paris, discussed medical, psychological and pedagogical methods to be employed in developing and instructing children of arrested mental development.

Dr. George E. Shuttleworth, the distinguished English psychiatrist, presented an able paper in which he told what was being done in England for feeble-minded and other mentally defective children; and Dr. Fletcher Beach, also of England, furnished an important statistical study of the work being done in the United Kingdom. Professor Jean Demoor and Arthur Levoz, in a valuable paper, pointed out the necessity of emphasizing the physical rather than the intellectual training of defective children.

America was represented by four speakers in the third section of the congress: Mr. Charles L. Brace, secretary of the New York Society for the Protection of Children; Miss Anna Gamewell, of the Reform School for Boys at Glen Mills, Penn.; Director M. Anagnos, of the Perkins Institution for the Blind at Boston, and Miss Mary S. Garrett, in charge of a private school for deaf children in Philadelphia.

Mr. Brace presented two papers to the congress, the first of which dealt with the question of truants and incorrigibles. Of the 15,826 cases of truancy and incorrigibility with which his society had to deal in New York city, 33% of the children were Italians, 20% were American, 15% were Russians, 14% were German and 7% were Irish. Mr. Brace's second paper discussed the education of weak and sickly children. Miss Gamewell presented some of the phases of the mental training of juvenile delinquents; and Miss Garrett, who is one of the leaders in the American movement for the teaching of speech to the deaf, presented an altogether interesting paper on her own lines of work. Dr. Anagnos, the veteran director of the historic Perkins Institution, made an earnest plea for a more liberal education of the blind.

Director Dario Trentini, of the institution for the care of orphans, illegitimate and abandoned children at Matarello, in the Tyrol, presented two papers on his own particular lines of work. The training of epileptics was discussed by Dr. Alexandre Paris, of the University of Nancy, and Dr. Kölle, of Zurich. Speech defects, aphasia and kindred disturbances were presented in papers by Dr. Jean Gressler, M. Dufour and Dr. Georges Rouma. Mme. Aurep-Nordin told the congress of the schools for the deaf in Sweden, and Professor Edouard Drouot, of the National Institution for the Deaf at Paris, presented the problem of family education for young deaf children. Education of the blind in France was the subject of a paper by J. Sternheim; and Dr. Bourrillon, director of the French home for convalescents at Saint-Maurice, urged the establishment of special schools for the crippled and the deformed.

ASSOCIATIONS FOR THE PROTECTION OF CHILDREN.

The fourth section of the congress discussed problems touching the protection of childhood and youth. Professor Dejace, of the University of Liège, presided and thirty-eight papers were presented.

Not less than eight of the papers dealt with the temperance problem and the kinds of instruction for children on the effects of alcoholic stimulants on the human system. Two papers handled the tobacco habit and its effect on the development of the young. These papers emphasized the need of careful instruction on the effects of stimulants and narcotics; and as many of the speakers were alienists and neurologists, they advocated a saner method of procedure than that followed by the temperance crusaders in our own country twenty years ago.

The subject of the moral purity of youth was the topic of a note-

worthy address by Henri Hayem, secretary of the French League for Public morals; and Mlle. Chaptal, in an important paper, told what the Catholic Association for the Protection of Young Girls was doing in France to promote the moral welfare of the Third Republic.

The Ministering Children's League movement was the subject of several papers, as well as divers other agencies for the amelioration of the economic conditions of the children of the poor. Other questions before this section of the congress were: Vacation schools and colonies; protection of illegitimate children; school journeys; prevention of cruelty to animals; societies for the prevention of cruelty to children; and measures for the prevention of the spread of tuberculosis among children.

Two Americans were represented on the programme of the fourth section of the Liège congress: Judge R. S. Tuthill, of Chicago, on the nature and workings of the juvenile courts of the United States; and Professor Charles R. Henderson, of the University of Chicago, on the benevolent movements in this country for the protection of children in the family.

WILL S. MONROE.

Experimentelle Didaktik; ihre Grundlegung mit besondere Rücksicht auf Muskelsinne, Wille und Tat, von W. A. LAY. Wiesbaden, 1903. pp. 595.

Lay's book obtains its especial importance from the fact that it is, so far, the only work devoted entirely to the subject of Experimental Pedagogy. It is in no sense a compendium of results from experiments, but is rather written with the purpose of pointing out that all phenomena of consciousness have a pronouncedly motor side—Lay himself would say a motor basis—which demands investigation. A careful experimental study of Pedagogy would, Lay says, put an end to the speaking of the methods, or pedagogy, of this man or that man, as a system of individual thought; but would make Pedagogy a science, the same all over the world.

True Pedagogy must be based upon proper Psychology, the fundamental proposition of which is that in all animal life a reaction follows every irritation; "a physiological unity of nerves and muscles is present and has come to a higher development hand in hand with the perfection of the physiological-psychological fundamental processes. This unity, the type of all movement, is the *sensory motor fundamental process*." It is the problem of Pedagogy to make this the fundamental principle of teaching and instruction. "All phenomena of consciousness have a motor side," is the one thing which is emphasized again and again.

Lay first considers the Muscle-sense, and after demonstrating that there is no Innervation-sense, he shows that at the bottom of our entire mental life, are motor images and the Muscle-sense, the latter always of peripheral nature, forming, with sensations of position, very varied complexes from sensations of the joints, tendons, ligaments, muscles and skin. There is no perception without the movement of a sense organ, there is no sensation, idea, feeling, no act of willing without a motor sensation and a motor image. How important this is, he demonstrates by experiments in drawing, showing that "sensations of movement and touch are of almost as great value as that of light." The only other thing constantly emphasized is that "Representation is quite as important in Education as is Perception." From experiments with the motor organs he concludes: "Just as the impulse to activity in the sense organs shows the impulse to make observations, so the impulse to activity of the motor apparatus shows the impulse to work formatively with the world—to represent. There exists a reciprocal action between movements and the development of the soul;

where there is mental slowness there is always an unsatisfactorily developed muscle sense."

Feeling, interest, attention, suggestion, assimilation, association, imagination, thinking, practice, memory, learning and habit are then taken up in order; the work done by the better investigators is résuméd, everything tending to show the great importance of the sensory-motor process, the Muscle-sense and movement. Not only feeling and impulse, but also sensations and perceptions have their tendencies to go over into movement. "The psychological fundamental process shows us that the Will and Intellect are identical. The more instruction takes into account the motor side of consciousness, to give it the shape of instruction in *work*, just so much the more will it obtain for the development of the Will and for education."

The two more extensive experiments which Lay carried out are on (1) Perceptual types, and (2) Organization and Function. From the first he concludes: "In Orthography, the visual element predominates over the acoustic, the motor over both." It is not true that most people are auditory minded, as has been so often stated. Lay determined that in spelling and arithmetic the motor images of speech take a very large place, with all scholars; all pupils are speech motor, not all are writing motor. There are no perceptual types in the sense that word images and number images consist *only* in sound pictures or written pictures, or in the speech-motor or writing-motor images, but it is well to speak of auditory, visual and motor types in the sense that one predominates. Many pupils belong to one type in number images and another in speech images. A pupil may belong to one type in thinking of *things*, but to another in thinking of the words which represent the things, or of abstract terms. Practice and instruction can change a scholar from one type to another, or from a mixed type to a predominant one. From the earliest school years, all instruction should be made to appeal to as many senses as possible, else the instruction will mean practically nothing to some, and not develop others along all lines.

As to Organization and Function, exhaustive experiments showed that all scholars, and hence classes, have a rhythm of psychic energy grounded deep in their natures; that the psychic energy of each scholar moves up and down in waves during the day, reaching two high points, one in the forenoon, one in the afternoon. The psychic energy of a class is highest in March, lowest in July and again in October. The plan of having all the instruction in high schools in the morning is wrong; for while perhaps the wave of psychic energy is a little higher then than in the afternoon, it is more constant during the afternoon. The different studies of fatigue of school children are résuméd with the conclusion that the German school system, at least, is radically wrong; and that no person, child or adult, should work mentally so long as is demanded in the higher schools. In closing this section examinations are severely criticised, "with the express purpose of tearing such a degenerate arrangement to pieces." The last part of the book is devoted to "The nature of the Will, and of volitional activity, and of their relation to things innate, and that which has been made our own through the influence of the world around us." Here Lay deals more with theories and with philosophy, all tending to establish his basal belief in the sensory-motor process as the fundamental principle of Psychology and Pedagogy alike.

"Experimentelle Didaktik" is a real contribution to Pedagogy; perhaps one of the most important of the last decade. Aside from the experiments which Lay conducted, it is much more than a compilation of what other people have done and written, in that it has taken

many commonplace beliefs and theories and placed them upon a sure psychologic ground. The theory that Attention is a complex of essentially motor elements, is stated here with refreshing clearness, and the chapter on Perceptual Types would alone make the book a valuable one. JAMES RALPH JEWELL.

Lo Svilluppo dell' Intelligenza nella privazione simultanea della vista e dell' udito. GIULIO FERRERI, Roma, Tipografia di Giovanna Balbi, Via della Mercede, 28-29, 1905. pp. 14.

This pamphlet of fourteen pages is the address given by Prof. Ferreri at the International Psychological Congress held at Rome in April, 1905. Its subject is Helen Keller, to whom Prof. Ferreri gave private instruction in Italian for sixty lessons, during which she learned to read and write Italian. In the course of these lessons, Prof. Ferreri had exceptional opportunities of conversing with Helen and of becoming familiar with her intellectual development. In this resulting study, he seeks to correct some of the exaggerated statements in regard to her and to interpret the actual facts, which are sufficiently remarkable without exaggeration. It has been said that Helen Keller has a peculiar musical sense and can distinguish between the style of Beethoven and that of Schumann, that she writes good poetry as well as excellent prose and that she can distinguish colors by touch. Such statements are, of course, impossibilities, but it is true that she enjoys music and uses language in regard to color in the usual way. But this implies neither musical sense nor color perception. The fact is, that while Helen Keller does not possess even an extraordinary delicate sense of touch as compared with others who are blind, her hand has, through long years of training, developed wonderfully delicate muscular perceptions, which enables her, not only to appreciate beauty of form and outline, but to recognize personality and often to interpret unconscious muscular movements on the part of others, so that she is aware of their moods and emotions. Her enjoyment of music is due to this same delicate muscular perception, which gives her a keen appreciation of measure and rhythm. In her use of language it must be remembered that she has learned many things by instruction about them, has read much and come in contact with many cultivated people. But this knowledge *about* things is to be sharply distinguished from knowledge gained directly through the senses, and it is to a failure to do this that most of the exaggerated statements about Helen Keller are due. But Prof. Ferreri thinks that she also shows "a certain abstraction from the specific sense of touch which ought to be taken into account in considering her intellectual activity, as if actually her intelligence had been developed without the mediation of the specifically given sensations," and that she furnishes a living argument against the materialistic dictum, "Nihil est in intellectu quod prius non fuerit in sensu." The results attained in Helen Keller's education should, he thinks, furnish inspiration for the instruction of all such doubly deprived children, and that the educational principles of Miss Sullivan, which are truly Herbartian, though worked out independently, should be of universal application

THEODATE L. SMITH.

The Negroes of Columbia, Missouri. A Concrete Study of the Race Problem, by W. W. ELWANG. University of Mo., 1904. pp. 69.

This Master's dissertation is based upon a study made during three years of residence in a community of which 30 per cent. are negroes. The negro problem, the author believes, is one essentially of economic adjustment. Booker Washington has demonstrated the practicability of industrial training on a large scale but only the federal govern-

ment can make it effective. They are essentially a nature people and the federal government should regard them, like Indians, as its wards. The author studies the occupation and wages of the negro population of this place, the religious life, the education of the preacher, etc. In the churches the struggle between the old hallelujah darky with genuine emotion and the proper younger generation who try to imitate the perfunctory service of the white church are plain to see. The burden of all the fervid message of the pulpit is "Do right and you will go to heaven." Immorality and a very devout spirit often go hand in hand. Superstitions, especially belief in witchcraft in the form of haunts, is very common. Health statistics show that the negro has less power to resist in the struggle of life than the Caucasian. In the United States as a whole the average age of deaths for the white is 35.8; for the negro, 28. The negroes have a very high death rate by constitutional disease, like consumption, pneumonia, heart and liver troubles. They take very few hygienic precautions. Bath-rooms are almost unknown. 540 of the families live in houses of 3 rooms; 438 in two; 236 in 4. Most of the families have four or five children, but those having three and six are a close second. More than half rent their so-called home. This herding, of course, is as unfavorable for morals as for health. The average rent per family per year is $69.72. Deliberate pre-natal murder is very common. Their distinction is "sexual concretism," physical stimulus being their chief craving and enjoyment. There is a good deal of promiscuity, and the author reaches the conclusion that from 85 to 90 per cent. of their women are unchaste.

The author computes that if one ship, carrying one thousand passengers should sail every day in the year, it would take more than twenty-five years to deport those now living, and the transportation alone, at fifty dollars per capitum, would cost five hundred million dollars. In addition to this they would have to be remunerated for the property they now hold, which aggregates seven hundred million dollars.

"Politically they ought to be frankly disfranchised. They are political idiots, and it is sheer madness to misuse and prostitute the privilege which the Anglo-Saxons won for themselves only through a thousand years of painful history. This would certainly work an immediate hardship upon the worthy few, but in a complex race question such as this, the individual can have no rights, and vicarious suffering is ever the cost of progress everywhere. It may be very important that a few intelligent and worthy negroes should have the right to vote. It is more important that the mass of negroes should be put into the way of progress, and the fact that the negro votes is an insuperable bar to his progress in the south. Religiously they ought to be under the guardian tutorship of the white churches. While we are sending well-educated, trained and expensively equipped white missionaries to die of fever among the savages of Africa, we still find it consonant with duty to turn over the semi-savages at home to the guidance of ignorant, frequently self-conceited, and often immoral negro preachers. We have taken hold of this entire negro problem at the wrong end." For their police control there should be separate police courts, as we have for offending juveniles. Their treatment should be less punitive and more reformatory. Their education should be adapted to their own needs and not be identical with that of the white children, as the Missouri constitution requires. The segregation of the negroes is as complete as it can well be. The whites desire to be helpful, but the young negroes are often full of distrust and latent animosity. In the competitive struggle the negro al-

ways goes to the wall and he can have no future without miscegenation. "This does not mean that there ought to be miscegenation, but only that without it the negro's case is hopeless." No matter how well trained he is, the negro cannot compete with the white man, for education does not transform a man morally. What he chiefly needs is work habit.

The Native Races of South Africa, by GEORGE W. STOW. Swan Sonnenschein & Co., London, 1905. pp. 618.

This book was written some years ago, but the author's premature death prevented its publication. The manuscript was purchased from Mr. Stow's widow by Miss Lucy C. Lloyd some time ago, but is only now printed under the editorship of George M. Theal. Mr. Stow went to Africa in 1843 and practically completed his study and wrote a preface to his book in 1880, dedicating it to Sir Bartle Frere. The author wrote from long acquaintance and was a very careful observer. He studied the traditions of the tribes, mapped their migrations and shows how certain tribes are descendant and apparently doomed to extinction while others are ascendant, gives a history of a horde, the lives of representative chiefs, accounts of various clans, their occupations, utensils, dress, something of their languages, drawings, social customs, methods of hunting, industries, etc. All in all, it is a book of very high value, and every one interested in Africa will feel a debt of gratitude to those who have secured its publication.

Das Geistesleben der afrikanischen Negervölker, von A. SEIDEL. A. Schall, Berlin, 1904. pp. 340.

The author begins with a brief account of the modern Egyptians, gives representative stories, proverbs, Märchen, songs. He then passes to tribes of the Hamitic stock, and makes similar selections of traditions and folk-lore, from half a dozen of the Bantu tribes and finally does the same for mixed races. The book is a compilation, but the selections are interesting.

The story of the Congo Free State, by H. W. WACK. With 25 illustrations and maps. G. P. Putnam's Sons, New York, 1905. pp. 634.

The author has been a student of mid-African affairs for seven years, and has met His Majesty the King of the Belgians who gave him access to the adminstrative archives. This book gives the story of the founding and development of the Congo Free State, describes the horrors of the Arab slave trade, the Berlin conference, the Brussels conferences, the campaigns against the Arabs, the mutinies of the Battela tribe, navigation, postal service, trade, revenue, missions, schools, and the Congo campaigns, as the author terms them, that have been conducted in the United States and in England. All the charges of cruelty, torture and extortion, which have been within recent years so persistently circulated against the Belgian government on the Congo, the author declares to be instigated by English interests. Now that rubber and coffee have, at last, after a long period of loss and doubt, made the land profitable, England has grown envious and impatient of this immense wedge, a third as large as the United States, which separates different English possessions in Africa. The book is thus confessedly more or less partisan, and the inference would be irresistible, from the facts which it presents alone, that the condition of the Congo Free State is now the greatest triumph the world has yet achieved in colonial administration. England, it is repeatedly intimated, is far behind in her methods. Great stress is laid upon mission work in this volume, and there are repeated pictures of very large groups of children on their knees in prayer. But little

is said about the rubber trade in connection with which the chief charges of atrocity are made.

The Unveiling of Lhasa, by EDMUND CANDLER. Edward Arnold, London, 1905. pp. 304.

These pages, we are told, were mostly written in the dry, cold wind of Tibet, when the ink was often frozen. Many of them are revised from the contributions of the author to the daily press of which he was a correspondent. The causes of the expedition, its progress, the various battles, on the way to Lhasa, the city and its temples, the far-famed Potala, the flight of the Grand Lama, and finally the retreat, are told with very many interesting illustrations. Instructive and fascinating as it is, it can hardly be compared with the more thorough work covering the same ground by Waddell.

Die graphische Darstellung als Mittel der Erziehung zum musikalischen Hören, von ROBERT HÖVKER. Otto Schulze, Göthen, 1899. pp. 31.

Robert Hövker, as a result of much experience and labor, has devised a graphic scheme of presenting music, particularly fugues and sonatas, to the eye. For this purpose he dispenses with all but the heads of notes and connects these by lines, omitting all time signs, and carrying the chief theme of form picture. He often, too, dispenses with one, two or three lines of the staff, so that his scheme slightly suggests the holes in a pianola roll connected with lines. By supplementing this method with colored dots and lines and by the occasional use of small circles, it is possible to represent one, or, indeed, a number of parts and instruments in an orchestra. Verbal explanations appended show the leading motive, subordinate phrases, elaborations and the various other divisions. By this means those who do not read music, it is claimed, are able to follow it more intelligently and to recall the chief motives. Their attention is called to symmetry, opposition, reversal and other æsthetic elements, and particularly for those eye-minded, and also for those who desire assistance in penetrating the mysteries of musical theory, it may be of assistance. It is urged, too, that young children by this method are able to apperceive and intelligently appreciate a much more refined and advanced kind of music than would otherwise be possible. Of course no one can judge the merits of such a scheme without considerable observation of its actual working in practice. It has, however, interesting suggestions for the psychologist.

The Fifth School Year. A course of Study with Detailed Selection of Lesson Material. Arranged by Months and Correlated by Herman T. Lukens. A. Flanagan Company, Chicago, 1905. pp. 213.

Dr. Lukens is probably the most learned man in America who is focusing his attention upon teaching methods in the normal school. He has been for years working upon the fifth grade. What is here presented rests on the assumptions of the correspondence of development in the individual and the race; that the curriculum subjects should be presented historically; that the psychological is better than the logical order; that the chief aim of school activity should be to develop right interests and ideals, so the best material for an age is that which arouses most interest; that learning is essentially an active motor process and not a passive one; that the process is the goal; that there is no sequence of studies in an ideal curriculum; that the social life of the child is the basis of correlation; and that interests must be organized with depth and not superficially. The work begins with a prospectus of the fifth year for each school month; for instance, for

September the work of nature study, geography, history, literature, number, language and the arts are each described with detail and with abundant co-ordinations, though with sufficient independence between the different branches. Very interesting is the author's history chart, where a vertical column, devoted to each decade, contains rough pictures, symbols, maps, etc., designed to illustrate the chief events from 1400 to 1900. Pictures of individuals here play an important rôle and all kinds of symbolic devices are used to symbolize the main events. An admirable system of weather record charts is kept. An apparatus for latitude and longitude, and a model of the Santa Maria are made; so are numeration tables. The floor is made into a map, and all kinds of tables studied by metric systems of presentation. It is impossible to describe in detail even the important points in this book. It is the newest book of the year and the most suggestive. It ought to be in the hands of, and if so, would be used by, every teacher in this grade in the country.

The Teaching of Modern Languages, by LEOPOLD BAHLSEN. Translated from the German by M. Blakemore Evans. Ginn & Co., Boston, pp. 97.

This is a book of great value. The author first gives a historical sketch of the methods of language teaching. He then discusses the reform of modern language teaching in Germany. Another chapter is devoted to pronunciation, sound physiology, phonetic transcription, etc. He then describes the first instruction to French and German on a phonetic basis. Then comes an outline of his analytic inductive method and a description of the German grammar as taught by it. The work concludes with an account of a reading course in German for a secondary school.

Physics, by CHARLES R. MANN and GEORGE R. TWISS. Scott, Foresman & Co., Chicago, 1905. pp. 453.

This book marks something of an epoch. The most striking feature of it is its modernity. It is essentially up-to-date, and its illustrations, of which there are 237, include the newest developments in this rapidly growing field of science. Another feature of it is the reduction of mathematics to more wholesome proportions. The attention and interest of the student are appealed to by questions and suggestions at the end of each chapter. Some of the experiments seem clumsy but are made in closer proximity to nature than are most of those performed in the laboratory. Much of the old lumber of the old physics text-books has been dropped. We know none of the many recent text-books in physics which seem so well calculated to appeal to the natural interests of boys in such problems.

The Elements of Business Law, by ERNEST W. HUFFCUTT. Ginn & Co., Boston, pp. 329.

This book seeks to present leading principles by means of simple and concrete examples taken generally from cases actually decided in the court. Then follow problems without conclusions, in order to afford exercise upon the principles drawn from the text and the examples. These, too, have chiefly been taken from the decided cases, that they may be used as control. This method will be more interesting and instructive than dealing with abstract dogmatic statements.

Marriage and Divorce, by FELIX ADLER. McClure, Phillips & Co., New York, 1905. pp. 59.

The writer pleads for separation with cause, but never divorce. The separation may be renewed again and again and be in effect per-

manent, but the difference is that in separation there is no permission to re-marry, and so far as release from intolerable conditions is concerned, separation entirely answers the purpose. Marriage is a relation between the living and not between the living and the dead, so that the permission to re-marry should not be given.

Eleventh Annual Report of the Schoolmasters' Association of New York and Vicinity. 1903-04.

This volume is made up of sixteen articles, by as many different men on educational subjects. Perhaps the most interesting are those on Pedagogy in 2000 A. D., The Batavia Experiment, The Ultimate Responsibility for Clean Athletics, The Mind of the Undergraduate.

Selections from Standard French Authors. A Reader for First and Second Year Students, by O. G. GUERLAC. Ginn & Co., Boston. pp. 214.

Latin Composition for Secondary Schools, by BENJAMIN L. D'OOGE. Parts 1, 2 and 3. Ginn & Co., Boston.

Manual of Medial Writing Designed to Accompany the Medial Series of Writing Books, by HORACE W. SHAYLOR and GEORGE H. SHATTUCK. Ginn & Co., Boston, 1904. pp. 38.

Little Brother to the Bear and Other Animal Studies, by WILLIAM J. LONG. Wood Folk Series. Book Five. Ginn & Co., Boston, 1904. pp. 178.

The Dramatic First Reader, by ELLEN M. CYR. With illustrations by Edith Browning Brand. Ginn & Co., Boston, 1905. pp. 104.

The Supervision of Country Schools, by ANDREW SLOAN DRAPER. C. W. Bardeen, Syracuse, N. Y., 1904. pp. 43.

The Woman Trustee and Other Stories About Schools, by C. W. BARDEEN. C. W. Bardeen, Pub., Syracuse, N. Y., 1904. pp. 259.

The Value of Symmetry in Education and Character, by GEORGE F. EAMES. Journal of the American Medical Association, June 18, 1904. pp. 8.

The Library and Its Administration. State Normal School at Worcester, Massachusetts. Pamphlet A. pp. 7. Child Study—Observation of Children. Pamphlet B. pp. 6. "Larger" Kindergarten Material. Pamphlet C. pp. 3. The Platform Exercise—Oral Expression. Pamphlet D. pp. 12. Apprenticeship—Practice-teaching. Pamphlet E. pp. 10. Graduates' Class Reunions. Pamphlet F. pp. 4.

Internationales Archiv für Schulhygiene. Herausgegeben von AXEL JOHANNESSEN & HERM. Griesbach. 1. Band. Wilhelm Engelmann, Leipzig, 1905. pp. 158.

Memory, and What Can Be Done to Improve It. Pelman School of Memory. New York City, 1904. pp. 56.

Twenty-First Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1899-1900, by J. W. POWELL. Government Printing Office, 1903. pp. 360.

Twenty-Second Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1900-1901, Part I, by J. W. POWELL. Government Printing Office, Washington, 1904. pp. 320.

NOTE.

CHILDREN'S ATTITUDE TOWARD CLOTHES. Miss Lillian A. Rusling has made a study, not yet published, of children's attitude toward clothes by asking them to answer the following questions: 1. Do you often tear, soil, or lose your clothes, hat, shoes, or anything you wear? 2. How do you feel when you do it? 3. Why? 4. What particular thing that you wear would you most dislike to tear, soil, or lose? 5. Why? She tabulated about 1,700 answers of children 8 to 13 years of age.

Her results indicate that boys' recklessness with clothes decreases from 8 (80%) to 12 (60.5%), after which it increases till 13 (69%); that with girls this recklessness reaches its minimum at 10 to 11 (65%), after which it increases till 13 (80%).

The answers to the question, "How do you feel when you do it?" she grouped under "Sad," "Mad," "Glad." With the first the percentage with the boys was lowest at 9 (55%) and highest at 12 (61%); with the girls it was lowest at 8 and at 13 (60%), and highest at 10 (65%). Anger was less prevalent than grief and more prominent with the boys than with the girls. With the boys it was highest at 10 (38%) and lowest at 13 (32.5%); with the girls it was most prominent at 8 (38.5%) and lowest at 13 (30%). Very few were glad; 8.5% of the boys at 10 and 7.5% at 13, but only 1% at 11. With the girls there was a gradual increase from 8 to 13, the percentage ranging from 1.5 to 10%.

The reasons *why*, she groups under three rubrics, "Pride," "Fear," "Because." She finds that "Pride," *i. e.*, because they are proud of their clothes, is most prominent with both boys and girls. With the boys it is lowest at 12 (43%) and highest at 13 (70%) with an upward wave also at 10; with the girls it rises rapidly from 9 to 10, remains the same from 10 to 12 but rises rapidly toward 13 when it reaches its maximum (65.5%). Boys show more fear than girls, probably because the rod is spared on them less than on the girls, and is most prominent at 12 (35%); with the girls it is most prominent at 8 to 9, decreases till 11 (13.5) and again increases till 13 (17.5%). Many gave no particular reason but simply said "because." This was most prominent at 9, 31% for boys and 41% for girls, decreased somewhat abruptly at 10, 18% for boys and 27% for girls, after which it varied little. The percentage of girls that give this answer is uniformly about 10% higher than that of the boys.

Ornamental articles of dress cause most regret when they are lost or torn. It is not so much the fear of punishment as the idea to do without the thing they like or are proud of that causes them worry.

Miss Rusling thinks her results show that accidents to children's clothing are not always due to natural depravity, because so many feel sad at their loss. That boys are as vain about clothes as girls. That little boys worry most when their hats are temporarily mislaid, but that girls seem more attached to mittens and coats.

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